Curriculum Vitae (updated 22/02/2025)

Dr. Mousa AL-Akhras, BSc, MSc, Ph.D., Senior MIEEE
Chair of IEEE Jordan Section

Personal Details:

Name:	Mousa T. M. AL-Akhras
Nationality:	Jordanian
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Work Number:	+ 962 (0) 6 53 55 000 ext 22610
Address (work):	King Abdullah II School of Information Technology The University of Jordan, P. O. Box 13835, Postal Code 11942 Amman, Jordan
E-mail:	mousa.akhras@ju.edu.jo Mousa.Akhras@ieee.org / Mousa78@yahoo.com
Personal Website	http://eacademic.ju.edu.jo/mousa.akhras

Specialization:

Computer Science / Artificial Intelligence & Multimedia Networking

Academic Qualifications:

August 2007	**Ph.D.** in Computer Science Major: Communications and Neural Networks De Montfort University, UK, http://www.dmu.ac.uk Thesis Title: Quality of Media Traffic over Lossy Internet Protocol Networks: Measurement and Improvement. NB: I've developed many techniques based on Artificial Neural Networks and Genetic Algorithms. Supervisors: Professor Hussein Zedan and Professor Robert John
June 2003	**M.Sc.** in Computer Science, Average 3.81 / 4. The University of Jordan, http://www.ju.edu.jo Thesis Title: Instance Reduction Using Techniques for Building Ensembles of Classifiers Supervisor: Dr. Khalil El-Hindi
January 2000	**B.Sc.** in Computer Science, Average 3.35 / 4 The University of Jordan, http://www.ju.edu.jo Graduation Project: Part of a team of 3 members developed Banking System using Developer R2.1 2000 Forms and Reports
1996	General Secondary Education Certificate Exam Scientific Branch, Average 91.2%

Academic Posts

10/12/2012–Present (On Unpaid Leave from 2014-2022)	Associate Professor Department of Computer Information Systems King Abdullah II School for Information Technology, The University of Jordan, Amman, Jordan
29/9/2022–23/9/2023	Head of Computer Information Systems Department King Abdullah II School for Information Technology, The University of Jordan, Amman, Jordan
24/08/2014–20/8/2022	Associate Professor + Coordinator for Master in Information Security / Cybersecurity Program College of Computation and Informatics Saudi Electronic University, Riyadh, Kingdom of Saudi Arabia
17/10/2007–9/12/2012	Assistant Professor Department of Computer Information Systems King Abdullah II School for Information Technology, The University of Jordan, Amman, Jordan
2010-2014	Arab Open University – Jordan Branch - Part time Assistant and Associate Professor
12/2009–11/2010	Assistant Dean for Development and Computer Affairs, Faculty of Graduate Studies, The University of Jordan, Amman, Jordan
10/2004–02/2005	Tutor - De Montfort University, UK
08/2003–01/2004	The University of Jordan - Teaching Assistant
06/2003-08/2003	Philadelphia University, Jordan - Part-Time Lecturer
10/2002–06/2003	Amman Private University – Lecturer Teaching Introduction to Computer (Skills-1) and Programming Language (1), C++ Course.

Industrial Experience

08/2002 – 09/2002	**ESKADENIA SOFTWARE SOLUTIONS** , **www.eskadenia.com**- **Consultant agreement for a single project. http://hotels.mota.gov.go** **Business:** This is a website for MOTA (Ministry of Tourism and Antiques). The purpose of this website was to develop an automated web site to collect information about hotels' reservations and fulfilment in hotels across Jordan. This Ministry previously was collecting that information manually. Each hotel has an ID and Password to log on to his profile and enter the hotels information on a monthly basis. The entered information is processed automatically by the new system and set of reports were generated on the web using Crystal report. **Implementation:** ASP was used for website development and while Crystal Reports used to prepare the summary and analysis reports. MS-SQL 2000 was the backbone database.
05/2001 – 08/2002	**3TierFactory Software Solutions, www.3TierFacory.com -System Analyst and Senior VB Developer** **Projects:** 1. Accounting System: a. Developing a trusted accounting package for the local market for middle to large size companies. b. Careful design for the system for ease of use and good understand of functionality from the end user's perspective. c. This is the core system where other systems can be integrated with. 2. Inventory/Stores System: a. This system can be integrated with the accounting system. b. This system used to manage the stock items in the stores, and to produce the stocks sales reports. 3. Car Show System: a. The system is used to manage the cars expenses and sales. b. This system can be integrated with the accounting system. 4. Repair Parts and Maintenance System: a. This system is used to manage the maintenance process and the parts repair schedule. b. Set of reports is generated to report about the available machines, repair parts, total maintenance's expenses for the machines and other set of reports 5. News Papers' Ads and Invoice System: I worked as a team coordinator in this project and helping in testing some parts of the system **Technology:** 1. VB 6.0 was used as the Programming language. 2. Sql Server 2000 Database. 3. InterBase Open source/ Free of License/ light weighted Database is used as the backend database. 4. Crystal Reports was used as the reporting tool in various systems.
02/2000 – 04/2001	**Integrant Inc, www.integrantinc.com - Quality Assurance, team coordinator, analyst and database developer in many projects**. **Projects:** **1. http://www.CitizensAdvantage.Com, web application with Oracle Backbone Database** **Business:** The purpose of this project was to provide the facility for online loan submitting with immediate verification and approval or rejection through the connectivity with Zoot Credit Reporting Bureau through XML message exchange. **Implementation:** The project has two major parts: The first part was implemented using ASP/VB with VB Script and JavaScript with 3 tiers Architecture and this part available for public via the above web site and The Second part implemented using Oracle 8i forms and Reports with remote access using Oracle application server **2. NAGS Systems, National Auto Glass Systems** **Business:** The purpose is to administrate common database accessible from other systems. **Implementation:** The project implemented using Developer 2000. **3. http://www.HTRN.Org , Web project to announce for meeting schedules and announcements of the HTRN Business group**

Professional Membership, Editorial Board, Organizing and Technical Committees

1. External Verifier, Saudi Skills Standards (SSS), 2018 External Verification Program for Colleagues of Excellence.
2. Evaluator – New Master Programs in Computer Science for a Saudi Governmental University.
3. Evaluator – Deanship of Scientific Research – 3 Saudi Governmental Universities.
4. Head of Steering Committee of ACM Programming Contest, Jordanian Collegiate Programming Contest (JCPC) http://jordan.acmacpc.org/. Part of International Collegiate Programming Contest http://icpc.baylor.edu/ 2011 - 2014.
5. Member of the Editorial Board:
   - Saudi Electronic University Journal.
   - Communications, Science Publishing Group (SciencePG).
   - International Journal of Intelligent Information Processing - ISSN 2093-1964.
   - Advanced Electrical & Electronics Engineering and Scientific Journal (AEEESJ)
   - IET Teknologia Journal.
6. Guest Editor for International Journal of Information Technology and Web Engineering (IJITWE), Volume 7, Issue 2, 2012.
7. Guest Editor for International Journal of Information Technology and Web Engineering (IJITWE), Volume 9, Issue 4, October-November 2014.
8. IEEE
   - Chair of IEEE Jordan Section (1/1/2024 - Present).
   - Advisor of IEEE Computer Society, The University of Jordan (15/12/2023-Present).
   - Chair IEEE Jordan AI, Machine & Deep Learning, CV, LLM Grp (15/3/2024- Present).
   - Chair of Jordan Section Awards & Recognition Committee (15/3/2024- Present).
   - IEEE Senior Member (15/02/2014-Present).
   - IEEE Member (01/01/2009-14/2/2014).
   - Member of IEEE Computational Intelligence Society (CIS) (01/01/2010–Present).
   - Member of IEEE Robotics and Automation Society (RAS) (01/01/2010–31/12/2014).
   - IEEE Western Saudi Arabia Section Executive Committee Member – (26/02/2015–Now)
   - IEEE Western Saudi Arabia Section – Secretary (26/02/2015–22/6/2016).
   - IEEE Western Saudi Arabia Section – Secretary (12/09/2017–Now).
   - IEEE Jordan Section Executive Committee Member – Different roles as below (01/01/2010–31/5/2014)
   - Chair IEEE Jordan Computational Intelligence/Computer Joint Chapter (22/2/2012–4/5/2014).
   - Vice Chair IEEE Jordan Computational Intelligence/Computer Joint Chapter (02/08/2010–21/02/2012).
   - IEEE Jordan Section – Secretary General Activities (01/01/2010–31/12/2013).
   - IEEE Jordan Professional Activities Officer in Jordan (04/09/2011–31/5/2014).
   - e-Government, IEEE Computer Society Technical Community on (16/02/2014–Present).
   - Proctor for the teams participating in IEEEXtreme:
     i. 2012 – 2013, The University of Jordan
     ii. 2015 - 2016, Saudi Electronic University
     iii. 2018, King Abdulaziz University
9. Keynote Speaker
   - Medical Informatics and E learning Week, King Saud University, Riyadh, Saudi Arabia, 24-26 September, 2019. **The Role of Artificial Intelligence in Health Informatics: A Systematic Literature Review.**
   - Medical Informatics and E learning Week, King Saud University, Riyadh, Saudi Arabia, 5-6 December, 2018. **The Role of Artificial Intelligence in Health Informatics: A Systematic Literature Review.**
10. Technical committee and peer reviewer for the following conferences:

- 2020 International Conference on Computer and Information Sciences (ICCIS), Jouf University, Jouf, 10-11 April, 2020.
- 2019 IEEE Jordan International Joint Conference on Electrical Engineering and Information Technology (JEEIT), Amman, Jordan, 9-11 April, 2019.
- 2019 International Conference on Computer and Information Sciences (ICCIS), Jouf University, Jouf, 3-4 April, 2019.
- The 2019 Advances in Science and Engineering Technology multi-conferences (ASET) - International Conference on Internet of Things, Mechatronics and their Applications (
- IoTMA-2019), Dubai, UAE, 26-28, March, 2019.
- 2019 2nd International Conference on Computer Applications & Information Security (ICCAIS) Holiday Inn Izdehar area, Riyadh, Saudi Arabia, 19-21 March, 2019
- Technical Program Committee + Reviewer – The Third International Saudi Health Informatics Conference (ISHIC), 17-21 November, 2018, Riyadh, KSA.
- Technical Program Committee – 2018 International Conference on Industrial Internet of Things and Smart Manufacturing (IoTsm), September 5-6, 2018, London, United Kingdom.
- Technical Program Committee – 1st International Conference on Computer Applications & Information Security 2018 (ICCAIS-18), April 4-6, 2018, Riyadh, Saudi Arabia.
- Reviewer - International Conference on Internet of Things, Embedded Systems and Communications (IINTEC 2017), 20-22 October, 2017, Gafsa, Tunisia.
- Reviewer - The Fourth IEEE Jordan Conference on Applied Electrical Engineering and Computing Technologies (AEECT 2017), 11-13 October, 2017, Amman, Jordan.
- International Conference on Computer and Applications (ICCA'17), Dubai, United Arab Emirates, September 06-07, 2017.
- The International Conference on Computer Science and Information Technology (CSIT 2016), Amman, Jordan, 13 - 14, July, 2016.
- International Forum on Knowledge Asset Dynamics (IFKAD 2016) - Track Innovative Business Analytics in the Era of Big Data: Behavioral Trend Discovery Using Computer Intelligence, Dresden, Germany, 15-17 June, 2016
- 2015 IEEE 81st Vehicular Technology Conference: VTC2015-Spring, 11–14 May 2015, Glasgow, Scotland.
- The 7th International Conference of Computer Science and Information Technology (CSIT 2015), 18-19, March, 2015, Applied Science University, Amman, Jordan.
- The 8th IEEE GCC Conference & Exhibition, 1-4, February, 2015, Muscat, Oman.
- International Program committee, The Fifth International Symposium on Innovations in Information & Communications Technology (ISIICT 2014), 22-24 April, 2014, Philadelphia University, Amman, Jordan.
- International Program Committee Member - The 6th Asian Conference on Intelligent Information and Database Systems (ACIIDS 2014), 7-9, April 2014 Bangkok Thailand.
- 2013 1st International Conference & Exhibition on the Applications of Information Technology to Renewable Energy Processes and Systems (IT-DREPS 2013), 29-30 May 2013, Amman, Jordan.
- The fourth International Conference on Information and Communication Systems (ICICS'13), 23-25 April 2013, Irbid, Jordan.
- The 3rd International Conference on Computing and Artificial Intelligence (MIC-CAI2013), 5-7 April 2013, Belgrade, Serbia.
- The First International Conference on Communications, Signal Processing, and their Applications (ICCSPA'13), Sharjah, UAE, February 12-14, 2013.
- Intelligent Systems and Knowledge Engineering (ISKE) track of the 5th International Conference on Communications, Computers and Applications (MIC-CCA2012), Istanbul, Turkey, 12-14 October 2012.
- 2012 International Conference on Cyber-Enabled Distributed Computing and Knowledge Discovery (CyberC 2012), 10-12 October, 2012, Sanya, China.
- International Workshop on Advances in Data Management (ADM-2012) - co-located with International Conference on Advances in Computing, Communications and Informatics (ICACCI-2012), 3 - 5 August, 2012, Chennai, India.

- Computational Biosciences (CBS) track of Mosharaka International Conference on Biomedical Engineering, Electronics and Nanotechnology (MIC-BEN2012), Palma de Mallorca, Spain, 15-17 June 2012.
- International Arab Conference on e-Technology (IACeT'2012), 25-27 April, 2012, Zarqa University, Zarqa, Jordan.
- Industrial Automation and Embedded Systems track of 8th International Symposium on Mechatronics and its Applications, Sharjah, United Arab Emirates, April 10-12, 2012.
- Control, Robotics and Automation (CRA) track of Mosharaka International Conference on Power Engineering, Control and Mechatronics (MIC-PCM2012), 6-8 April 2012, Barcelona, Spain.
- International Program Committee - The Fourth IEEE International Symposium on Innovation in Information & Communication Technology (ISIICT 2011), 29 November- 1 December, 2011, Philadelphia University, Amman, Jordan.
- The Seventh International Multi-Conference on Systems, Signals & Devices (SSD'10), 27-30 June, 2010, Amman, Jordan.
- International Arab Conference on e-Technology, October 15-16, 2008, Amman, Jordan.
- The Fifth International Multi-Conference on Systems, Signals, and Devices, IEEE SSD'08, July, 2008, Amman, Jordan.

11. Technical committee & Reviewer for the following journals:
    - Journal of Decision Systems – Taylor & Francis
    - Journal of Infection and Public Health
    - JMIR Medical Informatics – JMIR
    - Autosoft Journal - TSI Press
    - Neural Computing & Applications – Springer.
    - Journal of Intelligent & Fuzzy Systems – IOS Press.
    - Computer Methods and Programs in Biomedicine – Elsevier.
    - Computers & Electrical Engineering – Elsevier.
    - IET Wireless Sensor Systems (WSS).
    - Journal of Computer Science – Science Publications
    - The International Arab Journal on e-Technology, ISSN 1997-6364, Arab Open University.

12. Organizing Committee for the following conferences
    - Technical Committee – Saudi Electronic University International Conference on Blended, November, 2017, Riyadh, Saudi Arabia.
    - Program Committee - International Conference on new Trends in Computing Sciences 11-13 October, 2017 Amman-Jordan
    - Program Committee - New Trends in Information Technology – 2017 (NTIT-2017), Amman, Jordan, April 25-27, 2017.
    - Publicity & Public Relations - The Third IEEE Jordan Conference on Applied Electrical Engineering and Computing Technologies (AEECT 2015), 3-5 November, 2015, Amman, Jordan.
    - Technical Program Chair - The Second IEEE Jordan Conference on Applied Electrical Engineering and Computing Technologies (AEECT 2013), 3-5 December, 2013, Amman, Jordan.
    - Publication Chair -2013 1st International Conference & Exhibition on the Applications of Information Technology to Renewable Energy Processes and Systems (IT-DREPS 2013), 29-30 May 2013, Amman, Jordan.
    - IEEE Jordan Professional Activities Summit, PA, October 2012, The Hashemite University, Zarqa, Jordan.
    - Steering Committee + Publications Chair + Intelligent Systems Track Chair- The IEEE Jordan Conference on Applied Electrical Engineering and Computing Technologies (AEECT 2011), 6 - 8 December, 2011, Amman, Jordan.
    - IEEE Jordan Professional Activities Summit, PA, November 2011, The University of Jordan, Amman, Jordan.

- Third Mosharaka International Conference on Communications, Networking and Information Technology (MIC-CNIT 2009), December 2009, Amman, Jordan.

13. Microsoft Academic Partner (Formerly known as Dot Net Advisor) – The University of Jordan (1/9/10-1/9/2012).

14. Consultant, Judge and Mentor for the following contests:
    - 2013 NYUAD Annual Hackathon: Building Apps for Social Good in the Arab World, Abu Dhabi, United Arab Emirates, 22-24 February, 2013. **Mentor**.
    - The Second F1 in Schools National Competition 2012 Amman, Jordan 12 May 2011. **Chief Judge**.
    - The 7th National Robot Programming Contest, Amman, Jordan 11-12 February 2012.
    - The First F1 in Schools National Competition 2011 Amman, Jordan 28 May 2011.
    - The First Lego League Arabia Championship 2010 Dead Sea, Jordan 13-14 March 2010.
    - The 1st First Lego League Arabia Championship, Dead Sea, Jordan 27-29 March 2009.
    - The 4th National Robot Programming Contest, Dead Sea, Jordan 3-4 December 2008.

15. Organizing committee for the following contests:
    - Head of Steering committee – The Second Universities Robotics Competition (URC 2013), 27-28/2/2013, The University of Jordan, Amman, Jordan.
    - First Universities Robotics Competition (URC'1), 9-10 May 2011, Philadelphia University, Amman, Jordan.

16. Other Committees:
    - Higher Education Committee - Services Development Master Plan for the years (2012-2015) in line with the Jordanian National Agenda (2006-2015)- cooperation with Jordan Enterprise Development Corporation (JEDCO).
    - Innovation and Technology Transfer Committee - Services Development Master Plan for the years (2012-2015) in line with the Jordanian National Agenda (2006-2015)- cooperation with Jordan Enterprise Development Corporation (JEDCO).

Funded Research Projects (Visits)

1. Saudi Electronic University (SEU). An Energy-Efficient Communication System (EECS) for Wireless Sensor Networks in Medical Applications. 1/2/2017-2/2/2018. Amount 94,200 SR
2. Deutsche Forschungsgemeinschaft (DFG). Analyzing the Effect of Packet Loss and Speech Enhancement Methods on the quality of Voice over IP (VoIP) Traffic. Research visit to Frankfurt University of Applied Sciences, Frankfurt, Germany. 24/7/2014-20/8/2014.
3. King Abdullah II Fund for Development (KAFD) + King Abdullah II Design and Development Bureau (KADDB) - Fleet Management and Optimal Route Planning using GIS Techniques and Cellular Networks, 2013. Amount 5000 JD
4. The University of Jordan - Deanship of Academic Research (DAR). HeliRobot: A prototype was built for flying robot using Lego NXT, 2011. Amount 500 JD
5. The University of Jordan - Deanship of Academic Research (DAR). Robot Library Assistant System: A prototype was built for a library assistant robot using Lego NXT, 2010. Amount 500 JD

Prizes - Awards

1. Outstanding Region 8 Chapter of the Month for September 2024 - IEEE University of Jordan CS Student Branch Chapter, Jordan - Advisor
2. 2024 Region 8 Student Branch Chapter of the Year (Medium) Award - IEEE University of Jordan CS Student Branch Chapter, Jordan - Advisor
3. 2024 Chapter of the Year Award (Globally) - IEEE University of Jordan CS Student Branch Chapter, Jordan - Advisor
4. 2019 – 3rd MENA Information Security Conference 2019 – Cyber Sabers Hackathon - 3rd Place.

5. 2019 Senior Projects Competition (SPC 2019), - 2nd Place, 10/4/2019, Saudi Electronic University, Riyadh, KSA.
6. 2018 – 2nd MENA Information Security Conference 2018 – Cyber Sabers Hackathon - 3rd Place.
7. 2016 – 1st Saudi National Programming Contest (NCCC), King Abdulaziz University, Jeddah, Saudi Arabia, 17-18/2/2016, 6th place Male (overall) - Abdulrahman Albatel, Ali Alenazy, Meshal Alajmi.
8. 2016 – 1st Saudi National Programming Contest (NCCC), King Abdulaziz University, Jeddah, Saudi Arabia, 17-18/2/2016, 2nd Place Female Team (11th overall) -Dalal Joban, Buthaynah Tahhan, Sondos Altalhi.
9. 2014 ACM Jordanian Collegiate Programming Contest (ICPC-JCPC), Applied Sciences University (ASU)-4th + 5th Places out of 93 teams, 31/10-1/11/2014. Students. Ahmad Borghul, Ahmad Abu Laban, and Saif Suliman. Rodwan Abu Odeh, Diaa Ayad And Abdullah Alian.
10. IEEE Jordan Section Active volunteer Award – Award Given by Jordan Section and presented by IEEE President (Prof. J. Roberto Boisson de Marca) during the section's annual meeting on 28/1/2014.
11. 2013 ACM Jordanian Collegiate Programming Contest (ICPC-JCPC), Applied Sciences University (ASU)-2nd Place, 15-16/11/2013. Students. Ahmad Borghul, Ahmad Abu Laban, and Saif Suliman.
12. The Second Universities Robotics Competition (URC 2013), 27-28 February 2013 The University of Jordan, Amman, Jordan — **Ball Collection 1st Place**. Lina Qasem + Lana Ezzidien+ Tala Ibrahim.
13. The Second Universities Robotics Competition (URC 2013) , 27-28 February 2013 The University of Jordan, Amman, Jordan — **Sumo Robot Game 3rd Place**. Dana AlMajaly, Dania Daoud.
14. The University of Jordan Distinguished Researcher Award for the year 2011.
15. 2012 ACM Jordanian Collegiate Programming Contest (ICPC-JCPC), Princess Sumaya University for Technology (PSUT)-3rd Place, 16-17/11/2012. Students. Yazan Dabain, Omran AlAmayreh, and Ethar Abu Awwad.
16. Proctor for the team that achieved the 31st ranking in the world out of 1941 teams- IEEEXtreme Programming challenge, 20/10/2012. Students. Mohammad Natsheh, Yazan Dabain, and Omran AlAmayreh.
17. Nominated for Ministry of Higher Education and Scientific Research – Scientific Research Support Fund. Prize for distinguished researcher in IT sector in Jordan over the years 2007-2011.
18. Middle East Technology Show 2011 (METS'11)-University Compeitition-3rd Place. Delta Robot Project. Tariq Abu Lebdeh+Lina Qasem+Majd Sabbah.
19. First Jordanian Universities Robotics Competition (URC'1), 9-10 May 2011, Philadelphia University, Amman, Jordan – **Sumo Robot Game Best Design 1st Place**. Abullah Qurashi+Yazan Kobari.
20. First Jordanian Universities Robotics Competition (URC'1), 9-10 May 2011, Philadelphia University, Amman, Jordan – **Sumo Robot Game Overall 3rd Place**. Osama Abu Qaoud +Ali Hussein+Lina Qasem.
21. First Jordanian Universities Robotics Competition (URC'1), 9-10 May 2011, Philadelphia University, Amman, Jordan – **Maze Robot - Best Programming 1st Place**. Tariq Abu Lebdeh.
22. First Jordanian Universities Robotics Competition (URC'1), 9-10 May 2011, Philadelphia University, Amman, Jordan – **Maze Robot - Overall 3rd Place**. Tariq Abu Lebdeh.
23. Second Lego League Arabia Championship, 13-14 March 2010, Dead Sea, Jordan – **Scientific Exhibition 1st Place Award.** Bara'a Imran.
24. 1st First Lego League Arabia Championship, 27-29 March 2009, Dead Sea, Jordan – **Audience Voting 1st Place Award.** Noor Jaber-Rawan Abu Zaid-Robot Library Assistant.
25. 1st First Lego League Arabia Championship, 27-29 March 2009, Dead Sea, Jordan – **Proof of Concepts Award.** Noor Jaber-Rawan Abu Zaid-Robot Library Assistant.

Research Interests

Network Security and Cryptography
Multimedia Networking: Voice over IP & Quality of Speech Aspects, IPTv
Artificial Intelligence:
Robotics, Artificial Neural Networks (ANN), Genetic Algorithms (GA), Fuzzy Logic (FL)

Learning Methodologies

Electronic Learning **(**E-Learning), Mobile Learning (M-Learning)

Database Systems

Publications:

Scopus Author Identifier: 25653537100,
Researcher ID: O-6204-2016
ORCID: orcid.org/0000-0002-2208-372X
HCST National Researcher number (http://resn.hcst.gov.jo): **8132**

International Journals - Submitted

International Journals

1. Nasser Jarallah Al-Ghamdi, **Mousa Al-Akhras**, Fuad Alhosban, Forensic Analysis of Health and Fitness Applications on Android, Information & Digital Security, 2024 2 (1), 242-265.
2. Maha Helal, Mohammed Bakhamis, Mousa Al-Akhras, Samer Atawneh, Ibrahim Al-Oqily, Tariq Kashmeery, Smart detection of denial of service (DoS) attacks in internet of vehicles (IoV) networks, International Journal of Advanced and Applied Sciences, 2024 11 (11), 28-36.
3. Maha Helal, Abdullah Aldawsari, Mousa Al-Akhras, Bayan Abu Shawar, Hani Omar, Edge internet of things based smart home passwordless authentication, International Journal of Electrical & Computer Engineering, 2024 14 (6), 7186-7197.
4. Mo'ath AlShawabkeh, Saif Aldeen AlRyalat, Muawyah Al Bdour, Ayat Alni'mat, **Mousa Al-Akhras**, The utilization of artificial intelligence in glaucoma: diagnosis versus screening, Frontiers in Ophthalmology, 2024 4 (1), 1-7.
5. Samer Atawneh, Ziad Alshammari, **Mousa AL-Akhras**, Bayan Abu Shawar, A Security Framework for Addressing Privacy Issues in the Zoom Conference System, Journal of Internet Services and Information Security, 2024 14 (1), 242-265.
6. **Mousa AL-Akhras**, Saud Alghamdi, Hani Omar and Hazzaa Alshareef, A machine learning technique for Android malicious attacks detection based on API calls, Decision Science Letters, 2024 (13), 29-44.
7. **Mousa AL-Akhras**, Abdulrhman ALMohawes, Hani Omar, Samer Atawneh and Samah Alhazmi, Android malicious attacks detection models using machine learning techniques based on permissions, International Journal of Data and Network Science, 7 (4), 2053-2076.
8. **Mousa AL-Akhras**, Abdulmajeed Alshunaybir, Hani Omar, Samah Alhazmi, Botnet Attacks Detection in IoT Environment Using Machine Learning Techniques, International Journal of Data and Network Science, 7 (4), 1683-1706.
9. Fayez Alazemi, Ahmed Al-Mulla, **Mousa Al-Akhras**, Mohammed Alawairdhi, Marwah Al-Masri, Hani Omar and Hazza Alshareef, A trust management model in internet of vehicles, International Journal of Data and Network Science, 7 (2), 745-756.
10. Khalid Alhusayni, Raniyah Wazirali, **Mousa AlAkhras**, Marwah Almasri, Samah Alhazmi, A Multi-stage Secure IoT Authentication Protocol, Computer Systems Science and Engineering, 45(1), 459-481, 2023.
11. **Mousa Al-Akhras**, Zainab Darwish, Samer Atawneh, Mohamed Habib, Improving Association Rules Accuracy in Noisy Domains Using Instance Reduction Techniques, Computers, Materials and Continua, Vol. 72, Issue 2, pp. 3719-3749, 2022.
12. Ahmed Motmi, Samah Alhazmi, Ahmed Abu-Khadrah, **Mousa AL-Akhras**, Fuad Alhosban, Trust Management in Industrial Internet of Things Using a Trusted E-Lithe Protocol, International Journal of Advanced Computer Science and Applications (IJACSA), Vol 13, Issue 2, January, 2022.
13. Radwan Al-Shalalfa, Hazza Alshareef, Azzam Sleit, **Mousa Al-Akhras**, Samah Alhazmi, Efficient Utilization of Mirroring Servers Using Artificial Neural Networks, Journal of Computer Science, *Journal of Computer Science*. Vol. 18, Issue 1, pp. 42-56, 2022.
14. Abdullah Safwah Alyousef, Karthik Srinivasan, Mohamad Shady Alrahhal, Majdah alshammari, **Mousa Al-Akhras**, Preserving Location Privacy in the IoT Against Advanced Attacks Using Deep Learning, International Journal of Advanced Computer Science and Applications (IJACSA), Vol 13, Issue 1, January, 2022.

15. Mohammed Al-Drees, Marwah M. Almasri, **Mousa Al-Akhras**, Mohammed Alawairdhi, Building a DNS Tunneling Dataset, International Journal of Sensors, Wireless Communications and Control, Vol 11, Issue 6, July, 2021.
16. Mohammed Alsahli, Marwah Almasri, **Mousa Al-Akhras**, Abdulaziz Al-Issa, Mohammed Alawairdhi, Evaluation of Machine Learning Algorithms for Intrusion Detection System in WSN, International Journal of Advanced Computer Science and Applications (IJACSA), Vol. 12, Issue 5, pp. 617-626, May, 2021.
17. Asma' Amro, **Mousa Al-Akhras**, Khalil El Hindi, Mohamed Habib, Bayan Abu Shawar, Instance Reduction for Avoiding Overfitting in Decision Trees, Journal of Intelligent Systems. Vol. 30, Issue 1, pp. 438-459, 2021.
18. Khalid M. Al-Gethami, **Mousa Al-Akhras**, Mohammed Alawairdhi, Empirical Evaluation of Noise Influence on Supervised Machine Learning Algorithms Using Intrusion Detection Datasets, Security and Communication Networks, 2021.
19. **Mousa Al-Akhras**, Ala' Barakat, Mohammed Alawairdhi, Mohamed Habib, Using Soft Computing Techniques to Diagnose Glaucoma Disease, *Journal of Infection and Public Health*. Vol 14, Issue 1, pp. 109-116, 2021.
20. Waiel Mohammed Eid, Samer Atawneh, **Mousa Al-Akhras**, Framework for Cybersecurity Centers to Mass Scan Networks, Intelligent Automation & Soft Computing. Vol. 26, Issue 6, pp. 1319-1334, 2020.
21. **Mousa Al-Akhras**, Mohammed Alawairdhi, Ali Alkoudari, Samer Atawneh, Using Machine Learning to Build a Classification Model for IoT Networks to Detect Attack Signatures, *International Journal of Computer Networks & Communications (IJCNC)*. Vol. 12, Issue 6, pp. 99-116, 2020.
22. Faisal Alsattam, **Mousa Al-Akhras**, Marwah M. Almasri and Mohammed Alawairdhi, Rule-Based Approach to Detect IoT Malicious Files, *Journal of Computer Science*. Vol. 16, Issue 9, pp. 1203-1211, 2020.
23. Samer Atawneh, **Mousa Al-Akhras**, Iman AlMomani, Anas Liswi, Mohammed Alawairdhi, Collaborative Mobile-Learning Architecture Based on Mobile Agents, *Electronics*. Vol. 9, Issue 1, January 2020.
24. Mohammed Al Jutail, **Mousa Al-Akhras**, Abdulaziz Albesher, Associated Risks in Mobile Applications Permissions, *Journal of Information Security*. Vol. 10, Issue 2, pp. 69-90, April 2019.
25. Iman Almomani, Bassam Al-Kasasbeh and **Mousa AL-Akhras**, "WSN-DS: A Dataset for Intrusion Detection Systems in Wireless Sensor Networks," *Journal of Sensors - Special Issue on Recent Advances in Security and Privacy for Wireless Sensor Networks*, 2016**.**
26. Iman Almomani, Eman Al-Banna, and **Mousa AL-Akhras**, "Logic-Based Security Architecture for Systems Providing Multihop Communication," *International Journal of Distributed Sensor Networks*, vol. 2013, doi:10.1155/2013/768489
27. Khalil El Hindi and **Mousa AL-Akhras**. Smoothing Decision Boundaries to Avoid Overfitting in Neural Network Training. Neural Network World (ISSN 1210-0552), Vol. 21, Issue 4, pp. 311-325, 2011.
28. Iman ALMomani, Mohammed Al-Saruri, and **Mousa AL-Akhras**. Secure Public Key Exchange against Man-In-The-Middle Attacks during Secure Simple Pairing (SSP) in Bluetooth. World Applied Sciences Journal (ISSN 1818-4952, EISSN 1991-6426), Vol. 13, Issue 4, pp. 769-780, 2011.
29. **Mousa AL-Akhras**, Mohammad O. Salameh, Maha K. Saadeh, and Mohammed A. ALAwairdhi. An Autonomous Fuzzy-controlled Indoor Mobile Robot for Path Following and Obstacle Avoidance. International Journal of Computers (ISSN 1998-4308), Vol. 5, Issue 3, pp. 387-395, 2011.
30. Iman ALMomani, Maha Saadeh, **Mousa AL-Akhras**, and Hamzeh AL Jawawdeh. A Tree-Based Power Saving Routing Protocol for Wireless Sensor Networks. International Journal of Computers and Communications (ISSN 2074-1294), Vol. 5, Issue 2, pp. 84-92, 2011.
31. **Mousa AL-Akhras**, Abdullatif Abu-Dalhoum, Heba Saadeh and Heyam Bader. A Genetically-Optimised Artificial Neural Network Approach for Automatic Detection of Blood Vessels Using Gabor Filter. The Mediterranean Journal of Computers and Networks (ISSN 1744-2397), Vol. 7, Issue 2, pp. 202-212, April 2011.
32. **Mousa AL-Akhras**, Iman ALMomani and Azzam Sleit. An Improved E-Model Using Artificial Neural Network VoIP Quality Predictor. Neural Network World (ISSN 1210-0552), Vol. 21, Issue 1, pp. 3-26, 2011.

33. **Mousa Al-Akhras**, Rizik Al-Sayyed, Marwah Alian and Doaa Qwasmi. *Innovative Secure Mobile Banking Services*. International Journal of Interactive Mobile Technologies (iJIM) (ISSN 1865-7923), Vol. 5, Issue 1, pp. 12-21, January, 2011.
34. Moh'd Belal Al-Zoubi, Ali Al-Dahoud and **Mousa AL-Akhras**. *An Efficient Fuzzy K-Medoids Method*. World Applied Sciences Journal (ISSN 1818-4952, EISSN 1991-6426), Vol. 10, Issue 5, pp. 574-583, 2010.
35. **Mousa AL-Akhras**, Mohammed Alawairdhi and Dana Beidas. *Search in Multimedia Databases Using Similarity Distance*. International Journal of Intelligent Information Processing (ISSN 2093-1964), Vol. 1, Issue 1, pp. 50-60, September, 2010.
36. **Mousa AL-Akhras**, Maha Saadeh. *Automatic Valuation of Jordanian Estates Using A Genetically-Optimised Artificial Neural Network Approach*. WSEAS TRANSACTIONS on SYSTEMS (ISSN 1109-2777), Vol. 9, Issue 8, pp. 905-916, August 2010.
37. **Mousa AL-Akhras**, Heyam Bader and Abdullatif Abu-Dalhoum. *Genetic Algorithm Gabor Filter Optimisation for Automated Detection of Blood Vessels from Digital Retinal Images*. DIRASAT- Pure Sciences (ISSN 1560-456X), Vol. 37, Issue 2, pp. 67-84, August, 2010.
38. Azzam Sleit, **Mousa Al-Akhras**, Inas Juma, Marwah Alian, *Applying Ordinal Association Rules for Cleansing Data With Missing Values*, The Journal of American Science (ISSN 1545-1003), Vol. 5, Issue 3, pp. 52-62, June, 2009.
39. **Mousa T. AL-Akhras** and Iman M. ALMomani**,** *Design and Implementation of a SIP-based E-Learning System***.** International Journal of Internet Education (IJIE) (ISSN 1687-6482), Vol. 4, pp. 78-91, July 2009.
40. **M. AL-Akhras**, H. Zedan, R. John, I. ALMomani, *Non-intrusive speech quality prediction in VoIP networks using a neural network approach*, Neurocomputing (ISSN 0925-2312), 72 (2009), pp. 2595-2608.

International Conferences

1. Iman Almomani, Wissam Almahasneh, Abdalhameed Aldradkeh, Suleiman Alfar, **Mousa Al-Akhras**, and Musa Alyaman, "S2VC: Secure Smart Vehicular Communications", 2024 International Jordanian Cybersecurity Conference (IJCC) 17-18 December, 2024, Amman, Jordan, 2024, pp. 70-75.
2. https://doi.org/10.1109/IJCC64742.2024.10847268
3. Fares Alanazy, Ramzi Saifan, **Mousa Al-Akhras**, Samer Atawneh, Adeeb Alhomoud, Abusing iOS Permissions: A Security Perspective. *Twenty first International Multi-Conference on Systems, Signals & Devices (SSD'24)*, International Conference on Communication, Signal Processing & Information Technology (CSP), 22-25 April, 2024, Erbil, Iraq.
4. Sajid Ali Khan, Mohammed bin Abdulrahman Alawairdhi, **Mousa AL-Akhras**, Texture and Orientation-based Feature Extraction for Robust Facial Expression Recognition, 2023 21th International Conference on Software Engineering Research, Management and Applications (SERA), May 23-25, Florida, USA.
5. Fheed Alsubaie, **Mousa Al-Akhras**, Hamdan A. Alzahrani, Using Machine Learning for Intrusion Detection System in Wireless Body Area Network, Proceedings The First International Conference of Smart Systems and Emerging Technologies, Prince Sultan University, Riyadh, 3-5 November, 2020.
6. **Mousa Al-Akhras**, Abdulaziz I. Al-issa, Mohammed S. ALsahli, Mohammed Alawairdhi, Feature Selection to Optimize DoS Detection in Wireless Sensor Networks, Proceedings The First International Conference of Smart Systems and Emerging Technologies, Prince Sultan University, Riyadh, 3-5 November, 2020.
7. Ibrahim Alnuman, **Mousa Al-Akhras,** Machine Learning DDoS detection for Generated Internet of Things Dataset (IoT Dat), Proceedings of 2020 International Conference on Computer and Information Sciences (ICCIS), Jouf University, Jouf, 13-15 October, 2020.
8. Anas Al Suwailem, **Mousa Al-Akhras**, and Kareem Kamal A.Ghany**,** Evaluating Snort Alerts as a Classification Features Set, Proceedings of The 1st Global Conference on Artificial Intelligence and Applications (GCAIA 2020), Jaipur, Rajasthan, India on September 8-10, 2020.
9. Ali Mehdi, Safaa Ahmad, Rawand Abu Roza, Mohammed Alawairdhi, **Mousa Al-Akhras**, Neural Iris Signature Recognition (NISR), *Proceedings of 2019* International Conference on Computing (ICC 2019), Riyadh, KSA, 10-12 December, 2019.
10. Mohammad M. Alshaer, **Mousa Al-Akhras**, Abdulaziz Albesher, Security-Aware Deployment of SDN-NFV in TELCOS Networks, *Proceeding of the 4th Edition of World conference on Complex*

Systems – Session on Machine Learning Techniques and Information Security (MLTIS), Ouarzazate, Morocco, 22-25 April, 2019.

11. Abdulaziz I. Al-issa, **Mousa Al-Akhras**, Mohammed S. ALsahli, Mohammed Alawairdhi, Using Machine Learning to Detect DoS Attacks in Wireless Sensor Networks, *Proceedings of 2019 IEEE Jordan International Joint Conference on Electrical Engineering and Information Technology (JEEIT)*, Amman, Jordan, 9-11 April, 2019.
12. **Mousa AL-Akhras**, Artificial Intelligence in Healthcare, **Health Informatics Winter Course**: Workshop in Innovations for health and Medical Practice, 9-13 February, 2019, King Saud University, Riyadh, KSA. **Keynote Speaker**.
13. **Mousa AL-Akhras**, The Role of Artificial Intelligence in Health Informatics: Systemic Literature Review, Medical Informatics and E learning Week, 5-6 December, 2018, King Saud University, Riyadh, KSA. **Keynote Speaker**.
14. **Mousa AL-Akhras**, The use of Artificial Intelligence in Medical Problems, Medical Informatics and E-Learning Week, 23-24 April, 2018, King Saud University, Riyadh, KSA. **Keynote Speaker**.
15. Badr Aleidi, Abdulaziz Albesher, **Mousa Al-Akhras**, Using Blockchain Technology to Validate the Integrity and Confidentiality of Backups Versions on the Cloud, *Proceeding of Al Yamamah Information and Communication Technology Forum YUICT*, King Fahd National Library, Riyadh, KSA, 4-5 March, 2018. ISBN: 978-603-02-6751-4.
16. Zainab Darwish, **Mousa Al-Akhras**, Mohamed Habib, Use Filtering Techniques to Improve The Accuracy of Association Rules, 2017 IEEE Jordan Conference on Applied Electrical Engineering and Computing Technologies (AEECT), 11-13 October, 2017, Amman, Jordan.
17. Khalid Al Medbel, **Mousa Al-Akhras** and Hitham Alqadheeb, e-Health Information Security: Threats and Security Risks Assessment in Hospitals in Saudi Arabia, The Second International Saudi Health Informatics Conference (ISHIC), 16-20 April, 2017, Riyadh, KSA.
18. **Mousa Al-Akhras**, Ala' Barakat and Mohamed Habib, Using Support Vector Machine to Diagnose Glaucoma Disease, The Second International Saudi Health Informatics Conference (ISHIC), 16-20 April, 2017, Riyadh, KSA.
19. **Mousa AL-Akhras**, The Effect of Robotics Platforms on the Educational Performance of Undergraduate University Students, The First Arab Robotics Conference, 14-16 October, 2012, Amman, Jordan.
20. Iman ALMomani, **Mousa AL-Akhras**, Internet Skills in Scientific Research - In Arabic (مهارات إستخدام الإنترنت في البحث العلمي), The Fifth Conference On Scientific Research in Jordan, 19 November, 2011, Amman, Jordan.
21. **Mousa AL-Akhras**, Maha Saadeh, Emad AL Mashakbeh, Heba Saadeh. Path Following and Obstacle Avoidance Fuzzy Controller for Mobile Indoor Robots. The 11th WSEAS International Conference on Robotics, Control and Manufacturing Technology (ROCOM '11), 8-10 March, 2011, Venice, Italy. ISBN: 978-960-474-283-7.
22. Iman Al Momani, Maha Saadeh, Hamzeh Al Jawawdeh, **Mousa Al-Akhras**. Energy Awareness Tree-Based Routing Protocol for Wireless Sensor Networks. The 10th WSEAS International Conference on Applied Computer and Applied Computational Science (ACACOS '11), 8-10 March, 2011, Venice, Italy. ISBN: 978-960-474-281-3.
23. **Mousa AL-Akhras** and Omar Daoud. Evaluating The NGN Performance Based On Duplicate Transmission Of Voice Packets. *Seventh International Multi-Conference on Systems, Signals & Devices (SSD'10)*, Vol. III: *The Conference on Communication & Signal Processing*, 27-30 June, 2010, Amman, Jordan. ISBN: 978-9973-959-25-6.
24. **Mousa AL-Akhras,** Khaled Daqrouq, and Abdul Rahman Al-Qawasmi. Perceptual Evaluation of Speech Enhancement. *Seventh International Multi-Conference on Systems, Signals & Devices (SSD'10)*, Vol. III: *The Conference on Communication & Signal Processing*, 27-30 June, 2010, Amman, Jordan. ISBN: 978-9973-959-25-6.
25. Marwah Alian and **Mousa AL-Akhras**. AdaLearn: An Adaptive E-Learning Environment. *The 2010 International Conference on Intelligent Semantic Web - Services and Applications (ISWSA 2010)*, 14-16 June, 2010, Amman, Jordan. ISSN 2218-1504. Proceedings ISBN: 978-1-4503-0475-7.
26. **Mousa AL-Akhras**. An Evolutionary-Optimised Artificial Neural Network Approach for Automatic Appraisal of Jordanian Lands and Real Properties. The 11th WSEAS International Conference NEURAL NETWORKS (NN'10), 13-15 June, 2010, Iasi, Romania. ISBN: 978-960-474-195-3. ISI

27. Iman Al-Momani, Asma' Abdel Aziz and **Mousa AL-Akhras**. Secure and Power Saving Routing Protocol For Wireless Sensor Networks. The *11th WSEAS International Conference on FUZZY SYSTEMS (FS'10)*, 13-15 June, 2010, Iasi, Romania. ISBN: 978-960-474-195-3. ***ISI***
28. Heyam Bader, **Mousa Al-Akhras**, and Abdullatif Abu-Dalhoum, Improved Detection of Blood Vessels From Digital Retinal Images Using Optimised GABOR Filter, The 3rd Mosharaka International Conference on Communications, Computers and Applications (MIC-CCA 2009), 26-28 October, 2009, Amman, Jordan. ISBN: 978–9957–48607–5.
29. **Mousa AL-Akhras** and Khalil El Hindi, Function Approximation Models for Non-Intrusive Prediction of VoIP Quality. *IADIS International Conference on Informatics (I 2009) - Special Session on Telecommunications, Networks and Systems 2009 (TNS 2009)*, 17-19 June, 2009, Algarve, Portugal. ISBN: 978-972-8924-86-7.
30. Khalil El Hindi and **Mousa AL-Akhras**, Eliminating Border Instance to Avoid Overfitting. IADIS International Conference Intelligent Systems and Agents 2009 (ISA 2009), 21-23 June, 2009, Algarve, Portugal. ISBN: 978-972-8924-87-4.
31. Mohammed Alawairdhi, Hongji Yang, **Mousa AL-Akhras**, BlueCRM: A New Trend of Customer Relationship Management Systems, *12th IEEE International Workshop on Future Trends of Distributed Computing Systems, 2008. FTDCS '08*, pp.226-232, 21-23 Oct. 2008, China. ISBN: 978-0-7695-3377-3.
32. **Mousa AL-Akhras**, Wesam Almobaideen, Kareem Hdairis, Abdullah Al-Jaouni and Rami Al-Zeer, Remote conferencing using SIP protocol stack and Java APIs. The *7th International Internet Education Conference & Exhibition (ICT-Learn 2008)*, 7-9 October, 2008, Cairo, Egypt.
33. **Mousa Al-Akhras**, A Genetic Algorithm Approach for Voice Quality Prediction, *The 5th International Multi-Conference on Systems, Signals, and Devices, IEEE SSD'08,* Vol. III: *The Conference on Communication & Signal Processing*, 20-23 July, 2008 Amman, Jordan. ISBN: 978-9973-959-07-2.
34. I. Almomani and **M. Al-Akhras**, Statistical Speech Quality Prediction in Voice over IP Networks, *The 2008 International Conference on Communications in Computing (CIC'8): 14-17 July, 2008*. Monte Carlo Resort, Las Vegas, Nevada, USA. ISBN: 1-60132-058-2, pp. 146-152. ***Scopus.***
35. **M. AL-Akhras** and H. Zedan, Quality Estimation for Streamed VoIP Services, in *The 2nd European Young Researchers Workshop on Service Oriented Computing*, Leicester, UK, 11-12 June 2007.

Books

1. **Mousa AL-Akhras**, Measuring the Quality of VoIP Traffic, ISBN-13 978-3-639-30581-4, ISBN-10: 3639305817, VDM Publishing House Ltd., Germany, 2010. *
2. **Mousa AL-Akhras** and Iman ALMomani**,** Internet Skills in Scientific Research, ISBN 978-9957-72-040-7, ZAMZAM publisher and distributor, Amman, Jordan, 2011.

Book Chapters

1. **Mousa AL-Akhras** and Iman ALMomani, VoIP Quality Assessment Technologies -Book: VoIP Technologies, edited by: Shigeru Kashihara, ISBN: 978-953-307-549-5, Publisher: InTech, Vienna, Austria. Publishing date: February 2011

Workshops

1. **Mousa AL-Akhras**, Web Applications Hacking: SQL Injection & Cross-Site Scripting, *Proceedings of 2019* International Conference on Computing (ICC 2019), 10-12 December, 2019, Riyadh, KSA.
2. **Mousa AL-Akhras**, Advanced Research Workshop: Writing a manuscript, 14-15 April, 2018, King Saud University, Riyadh, KSA.
    - Writing up Results section: Result Interpretations and Presentations (Table, graphs, and diagrams).
    - Plagiarism and how to avoid doing so
3. **Mousa Al-Akhras**, Scientific Writing and Publishing, Journals Ranking and the Saudi Digital Library (SDL), 21 March 2018, Saudi Electronic University.
4. **Mousa AL-Akhras**, Web Applications Hacking: SQL Injection & Cross-Site Scripting, 15th Learning and Technology Conference (L&T 2018), 25-26 February, 2018, Effat University, Jeddah, KSA.

5. **Mousa AL-Akhras**, Data Mining, Winter Course on Research Methods: Using Data for Clinical Services and Patient Safety, 11-15 February, 2018, King Saud University, Riyadh, KSA.
6. **Mousa Al-Akhras,** Clinical Decision Support Systems, 24 January, 2018, King Saud University, Riyadh, KSA.
7. **Mousa AL-Akhras** and Fuad Alhosban, Scientific Writing and Publishing, Ranking of Journals (ISI impact factor) and Authors (H-Index) and the Saudi Digital Library (SDL) , The Second International Saudi Health Informatics Conference (ISHIC), 16-20 April, 2017, Riyadh, KSA.
8. **Mousa Al-Akhras, Tutorial** - Voice over IP - Technology & Challenges, *Mosharaka International Conference on Communications, Networking and Information Technology*, 5-7 December, 2008, Amman, Jordan.
9. **Mousa Al-Akhras**, Voice over IP (VoIP) - Tutorial, *Mosharaka International Conference on Communications, Computers and Applications*, 8-10 August, 2008, Amman, Jordan. ISBN: 978-9957-486-03-7.

Editor of the following Conferences Proceedings:

1. 2013 1st International Conference & Exhibition on the Applications of Information Technology to Renewable Energy Processes and Systems (IT-DREPS 2013), 29-30 May 2013, Amman, Jordan.
2. The IEEE Jordan Conference on Applied Electrical Engineering and Computing Technologies (AEECT 2011), 6 - 8 December, 2011, Amman, Jordan.

Attended Conferences, Workshops, Training Courses with Certificates

Conferences

1. MedVision, Artificial Intelligence and Medical Research Panel Discussion, 7 March, 2024, Amman, Jordan. **Speaker in Artificial Intelligence and Research Panel Discussion, Moderator: Prof. Yasir Rayan, Dean of Medicine**. Panellists: Dr. Iyad Sultan, Dr. Mousa AL-Akhras, Dr. Yaman Odat, Dr. Abdel-Latif Sabbagh.
2. Physician Scientist Summit, AI in Medicine, 4 May, 2023, Amman, Jordan. **Speaker**.
3. The First International Conference of Smart Systems and Emerging Technologies, Prince Sultan University, Riyadh, 3-5 November, 2020. **Author**
4. 2020 International Conference on Computer and Information Sciences (ICCIS), Jouf University, Jouf, 10-11 October, 2020. **Author**
5. The 1st Global Conference on Artificial Intelligence and Applications (GCAIA 2020), Jaipur, Rajasthan, India on September 8-10, 2020. **Author**
6. *2019* International Conference on Computing (ICC 2019), Riyadh, KSA, 10-12 December, 2019. **Author + Workshop**.
7. *2019 IEEE Jordan International Joint Conference on Electrical Engineering and Information Technology (JEEIT)*, Amman, Jordan, 9-11 April, 2019. **Author**
8. *The 4th Edition of World conference on Complex Systems – Session on Machine Learning Techniques and Information Security (MLTIS)*, Ouarzazate, Morocco, 22-25 April, 2019. **Author**
9. Health Informatics Winter Course: Workshop in Innovations for health and Medical Practice, 9-13 February, 2019, King Saud University, Riyadh, KSA. **Keynote Speaker**.
10. Medical Informatics and E learning Week, 5-6 December, 2018, King Saud University, Riyadh, KSA. **Keynote Speaker**.
11. Medical Informatics and E-Learning Week, 23-24 April, 2018, King Saud University, Riyadh, KSA. **Keynote Speaker**.
12. Cybersecurity: Future Challenge & Network Defenses, Workshop, King Saud University, Riyadh, Saudi Arabia, 12/3/2018 - **Attendant**.
13. Al Yamamah Forum on Telecommunications and Information Technology 2018, 4-5 March 2018, Riyadh, KSA – **Author**
14. 15th Learning and Technology Conference (L&T 2018), 25-26 February, 2018, Effat University, Jeddah, KSA - **Workshop**
15. 2017 IEEE Jordan Conference on Applied Electrical Engineering and Computing Technologies (AEECT), 11-13 October, 2017, Amman, Jordan - **Author**
16. The Second International Saudi Health Informatics Conference (ISHIC), 16-20 April, 2017, Riyadh, KSA - **Author + Workshop**
17. Cybersecurity Capacity and Capability Building Research, Innovation and Education Perspective Symposium, King Saud University, Riyadh, Saudi Arabia, 15/3/2017 - **Attendant**.

18. Saudi Arabian High Performance Computing Conference and Exhibition, KACST, Riyadh. 19-21 April 2016 - **Attendant**.
19. The 1st National Computing Colleges Conference, 17-18 February 2016, Jeddah, Saudi Arabia – **Attendant.**
20. The Second International Conference for Assessment and Evaluation (Learning Outcome Assessment), 1-3 December 2015, Riyadh, Saudi Arabia – **Attendant.**
21. Blackboard Teaching and Learning Forum 2015 (Innovation and Education), 30 November, 2015, Riyadh, Saudi Arabia – **Attendant.**
22. The First Summit on Countering Cyber Crimes, Naif Arab University for Security Sciences (NAUSS), 27-29 October, 2015, Riyadh, Saudi Arabia - **Attendant**.
23. The Fifth Refereed Conference for Theses and Dissertations Research, Faculty of Graduate Studies, The University of Jordan, 16-17 April, 2014, Amman, Jordan. **Session Chair.**
24. The 11th WSEAS International Conference on Robotics, Control and Manufacturing Technology (ROCOM '11), 8-10 March, 2011, Venice, Italy. **Author.**
25. The 10th WSEAS International Conference on Applied Computer and Applied Computational Science (ACACOS '11), 8-10 March, 2011, Venice, Italy –**Author + Session Chair**.
26. ICT 2010, 27-29 September, 2010, Brussels, Belgium – **Attendant**.
27. The 7th International Multi-Conference on Systems, Signals & Devices (SSD'10), 27-30 June, 2010, Amman, Jordan –**Author + Session Chair**.
28. The 11th WSEAS International Conference on NEURAL NETWORKS (NN'10), 13-15 June, 2010, Iasi, Romania. - **Session Chair**.
29. The 11th WSEAS International Conference on FUZZY SYSTEMS (FS'10), 13-15 June, 2010, Iasi, Romania. - **Author**.
30. The 11th WSEAS International Conference on EVOLUTIONARY COMPUTING (EC '10), 13-15 June, 2010, Iasi, Romania. - **Attendant**.
31. The 3rd Mosharaka International Conference on Communications, Networking and Information Technology (MIC-CNIT 2009), 21-23 December, 2009, Amman, Jordan – **Attendant**.
32. Mosharaka 3rd International Conference on Communications, Computers and Applications (MIC-CCA 2009), 26-28 October, 2009, Amman, Jordan - **Session Chair**.
33. IADIS International Conference on Informatics (I 2009), June 17-19, 2009, Algarve, Portugal – **Author**.
34. IADIS International Conference on E-Learning (eL 2009), June 17-19, 2009, Algarve, Portugal – **Attendant**.
35. Mosharaka International Conference on Communications, Networking and Information Technology, 5-7 December, 2008, Amman, Jordan- **Tutorial Presentation**.
36. The 7th International Internet Education Conference & Exhibition (ICT-Learn 2008), 7-9 October, 2008, Cairo, Egypt - **Author**.
37. International Arab Conference on e-Technology, October 15-16, 2008, Amman, Jordan – **Session Chair**.
38. Mosharaka International Conference on Communications, Computers and Applications, 8-10 August, 2008, Amman, Jordan- **Session Chair + Tutorial Presentation**.
39. The 4th International Workshop on Advanced Computation for Engineering Applications (ACEA08), Al-Balqa Applied University - Salt, Jordan, July 23-24, 2008– **Attendant**.
40. The 5th International Multi-Conference on Systems, Signals, and Devices, IEEE SSD'08, 20-23 July, Amman, Jordan – **Author**.
41. The 2nd European Young Researchers Workshop on Service Oriented Computing, 2007, Leicester, UK – **Author**.

Staff Training Courses – with certificates (Saudi Electronic University)

Blackboard Course Instructor's Orientation Course	6 Weeks	10/9/2015-19/11/2015
Blackboard Advanced	3 Days	26-28/4/2015
Cloud Computing	1 Day	23/4/2015
Blackboard Basic	2 Days	13-14/4/2015
Pearson Publisher	1 Hour	4/11/2014
Saudi Digital Library (SDL)	1 Hour	4/11/2014

Staff Training Courses – with certificates (The University of Jordan)

Why we should be concerned about climate change and its health impact in Jordan	2 hours	13/12/2023
ChatGPT for medical practice and research	6 Hours	22-29/11/2023
Design of Study Plan	6 Hours	15-16/1/2012
Teaching Strategies	12 Hours	17-22/1/2012
Effective Skills of University Teaching	12 Hours	23-26/1/2012
Learner's Assessment and Test Preparation	12 Hours	29/1-1/2/2012
Laws and Regulation of the University of Jordan	6 Hours	2-5/2/2012
University Work Ethics	2 Hours	6/2/2012

Workshops and Training Courses- with certificates

Conflict of Interest: Recognize Potential Conflicts and Their Causes		26 January 2025
Sanctions and Trade Controls for IEEE Volunteers		26 January 2025
IEEE Information Classification and Disclosure		23 February 2024
Integrity in Action: Compliance for IEEE Volunteers		27 January 2024
Conflict of Interest: Handling Competing Loyalties		27 January 2024
Fundamentals of Robotics – DeCAIR Project		19-23/2/2023
IBM Artificial Intelligence Analyst 2020 Mastery Exam		23/07/2020
National Commission For Academic Accreditation & Assessment (NCAAA) - Intended Learning Outcomes for Courses and Programs	12 Hours	11-12/2/2015
IEEE 2014 Volunteer Leadership Training Program		29/4/2014 – 14/11/2014

- IEEE Overview
- IEEE Conferences
- IEEE MGA Overview
- IEEE Educational Activities Board (EAB)
- Center for Leadership Excellence
- Membership Development
- IEEE Publications (PSPB)
- IEEE Affinity Groups
- IEEE Standards Association (SA)
- IEEE Bylaws
- IEEE Technical Activities (TAB)
- IEEE USA Overview
- How To Deal with Difficult People
- Communication Skills Part I
- The Ethics Dilemma
- Communication Skills Leaders Swear By - Part II
- SAMIEEE Overview
- Financial Management
- Communication Skills Part III
- vTools Overview
- Social Media
- Net Suite
- Meet IEEE President Elect

IAJIT Openconf – Conference Management Software- Zarqa Private University – Jordan	-28/02/2008
Technology Transfer Policies for Developing Countries-Islamabad-Pakistan	-12-17/10/2009
Proposal Writing Workshop, Centre for Educational Development, UoJ	- 22/02/2010
MS Academic Partners Workshop	- 07/09/2011

Research Training Program - with certificates (De Montfort University, UK)

Typesetting Documents Using LaTeX	-05/04/2006
Creating and Managing Large Documents	-04/04/2006
Effective Presentation Using PowerPoint	-27/03/2006
Using SPSS	-10/03/2006
Finishing Your Thesis and Preparing for the Viva	-09/03/2006
Managing Data Using Excel	-23/02/2006
Written Application Skills and Job Interview Skills	-14/06/2005

Writing For Publication	-20/06/2005
Presenting Your Research to an Audience	-02/03/2005
Research Methods	-22/10/2004-23/10/2004
Literature Searching and Reference Management	-23/06/2004
English Language for Academic Research Purposes	-22/06/2004
Intellectual Property Rights and Ethics	-15/06/2004
Writing Skills	-24/05/2004
Planning and Managing Research	-02/05/2004
Research Students Induction Event	-29/03/2004

Other Workshops

Writing Proposal for FP7 People Programme, given by Mr. Leonardo Piccinett, the University of Jordan. 13/4/2010.

Software Training Courses

Developer 2000 (Plsql, Forms4.5, Reports 2.5, Graphics 2.5), Aug -Oct 1998
ICDL
3DS

Online Learning Systems

Blackboard Collaborator
Adobe Connect
WizIQ

Committees & Councils

- **Saudi Electronic University (2014 – 2022):**
  Member of Deanship of Graduate Studies Council (2015-2020)
  Coordinator of the Master in Information Security Program
  Head of Research Committee
  Member of website development Committee
  Member of Cyber Security Club (1/1/2020-Present)

- **The University of Jordan (2007 – Present):**
  Head of several tender committees.
  1. Head of Tender Committee – Tender Number 325/2007. Supply, installation, operation and maintenance of the new network infrastructure at the University of Jordan and Hospital.
  2. Head of Tender Committee – Tender Number 325/2007 **Variation Order**. Supply, installation, operation and maintenance of the new network infrastructure at the University of Jordan and Hospital.
  3. Head of Tender Committee – Tender Number 392/2008. Supply, installation, operation and maintenance of new security hardware for the University of Jordan Computer Center.
  4. Head of Tender Committee – Tender Number 392/2008. Putting new specifications and requirements for new security hardware for the University of Jordan Computer Center.
  5. Head of Tender Committee – Tender Number 38/2011. Supply, installation, operation and maintenance of the new wireless network infrastructure at the University of Jordan and Hospital.

- **The University of Jordan**, *King Abdullah II School for Information Technology*, (2007–Present):
  - Ph.D. Program Admission Exam.
  - Member of ABET Accreditation Committee.
  - Member of the Scientific Research, Conferences, Seminars, and Expositions Committee.
  - Member of the e-Learning Committee.
  - Member of Scientific Week Committee.
  - Member of the Supervising committee on Students Union's elections.
  - Member of Faculty's Library Committee.

- Member of Social Committee.
- Member of Interaction with local society Committee.

- **The University of Jordan**, *Computer Information Systems Department*, (2007 – Present):
  - Member of the Scientific Research, Conferences, Seminars, and Interaction with local society Committee.
  - Member of the Higher Studies Committee.
  - Member of the Appointment and Promotion Committee.
  - Member of the M.Sc. Theses Examination Committees.
  - Member of Social Committee.
  - Head and Member of the Graduation Projects and Training Committee.
  - Member of the Students Affairs and Counselling Committee.
  - Member of the Library Committee.
  - Member of the Curriculum Planning Committee which covers the study of:
    - Computing Curricula 2005 which covers undergraduate programs in: Computer Engineering, Computer Science, Information Systems, Information Technology, and Software Engineering. This standard was a cooperative project between the Association for Computing Machinery (ACM), the Association for Information Systems (AIS), and the Computer Society (IEEE-CS).
    - MSIS 2006: Model Curriculum and Guidelines for Graduate Degree Programs in Information Systems. This standard was a cooperative project between ACM and AIS.
    - IS 2002 and IS 2010 Curriculum Guidelines for Undergraduate Degree Programs in Information Systems. This standard was a cooperative project between ACM, AIS, and Association of Information Technology Professionals (AITP).

Technologies

- PHP& MYSQL
- C#
- Java
- Visual Basic.Net
  a. Building Desktop Financial Applications.
  b. Web based Utilities and Dlls.
  c. Working on Accounting, Inventory/Stores, Car Show System, and Repair Parts System.
- MATLAB®
- Active Server Pages (ASP.Net): Building Database web applications Projects with Oracle/SQL Server Back end database using 3-tier web architecture using MTS and IIS web server.
- SQL Server 2005, Interbase & Oracle:
  a. Stored Procedures and Triggers.
  b. Forms and Reports.
  c. Database analysis and forward and reverse engineering.
- Crystal Reports:
- C++

Teaching & Training

Saudi Electronic University

Information Technology Bachelor Program

IT210	Computer Networks
IT241	Operating Systems
IT243	System Analysis and Design
IT340	Networks Management
IT409	IT Security and Policies
IT445	Decision Support Systems
IT446	Data Mining and Data Warehousing
IT490	Senior Project I

IT491 Senior Project II

Information Security Master Program

RES500 Academic Writing and Research Skills
IT500 Business Information Technology
IT571 Effective Communication and Business Alignment of IT Initiatives
IT575 Innovative Solutions in Complex Organizations
IT573 Information Technology in the Global Enterprise
IT581 Ethical Considerations in Managing Information Technology
CS562 Enterprise Cyber Security
CS664 Cyber Security Defence and Countermeasures
CS699 Capstone - Information Security

Cybersecurity Master Program

CYS501 Research Methods in Computational Studies
CYS564 Cyber Defense in Web Based Attacks
CYS566 Securing Enterprise Infrastructure using Cyber Security Techniques
CYS663 Digital Forensics and Investigations
CYS613 Security Threats and Countermeasures in Complex Organizational Networks
CYS642 Innovative Solutions in Software Security
CYS666 Advanced Principles of Cyber Security
CYS683 Ethical Hacking and Penetration Testing
CYS698 Capstone Project in Cyber Security

University of Creative Sciences

Human Resources Management – M.Sc. Level
Decision Support Systems – M.Sc. Level
System Analysis – M.Sc. Level
Database Systems – M.Sc. Level
Advanced Database Systems – Ph.D. Level
International Business Management – Ph.D. Level

The University of Jordan

Artificial Intelligence and Expert Systems - Ph.D. Level
Artificial Intelligence and Expert Systems - M.Sc. Level
Artificial Intelligence
Database Management Systems
Programming in Visual Basic.Net
Distributed Systems
Interpersonal Communication and Documentation
E-Government Graduation Project
Instructional Multimedia
Mathematics for Computer Graphics
Computational Theory
Special Topics (Voice over IP) – M.Sc. Level
Active Server Pages.Net
IT Fundamentals
Computer Skills-2

Arab Open University

Web Development using PHP and MySQL - M275
Networked living: Exploring Information and Communication technologies - T175B
Technologies for Digital Media – T325
Communication and Information Technologies (I) – T215A
Communication and Information Technologies (II) – T215B
Operating Systems Concepts – M350
Data, Computing and Information – A - M150A
Introduction to C# Programming – M107

Fundamentals of Algorithms and Data Structure – M211
Information and Communication Technologies: People and Interactions (I) – T209A
Information and Communication Technologies: People and Interactions (II) – T209B
Learning Online – TU170

Dar Al Uloom University

Systems Analysis Methodologies – M.Sc. Level – Arabic Track
Business Data Communication and Networking – M.Sc. Level – English Track
Web Applications Development – M.Sc. Level – Arabic Track
Information Security and Assurance – M.Sc. Level – English Track

Industry Training

Microsoft SQL Server 2016 Developer
Microsoft SQL Server 2016 Admin
Oracle Database: PL/SQL Fundamentals
UNIX, Linux Fundamentals
Creating and Managing Large Documents
Effective Presentation Using PowerPoint
Using SPSS – Basic + Advanced
Managing Data Using Excel
Comptia Security+ (Information Security Fundamentals)
Cryptography algorithms and mechanisms
Cybersecurity
Windows Security
Network Security
Critical Security Controls: Planning, Implementing and Auditing
Security System
CSX Fundamentals
CSX Practioner
CSX Specialist - Identify, Protect, Detect, Respond and Recover
CSX ExpertIT Infrastructure as Code (IaC)
DevOps
Service-Oriented Architecture (SOA) Overview
AGILE
Software Engineering
WEB DEVELOPMENT Using HTML, CSS & XML
MySQL & PHP
AdobePresenter
Computer HW & SW Maintenance
Web Application Security 8/2021
The eLearnSecurity Certified Professional Penetration Tester (eCPPT) Certification 8/2021
The International Association of Information Technology Asset Managers (IAITAM) 12/2021
SharePoint Business Intelligence 1/2022

أساسيات التعلم الإلكتروني
منهجيات تصميم محتويات التعليم الإلكتروني
مهارات استخدام التكنولوجيا في البحث العلمي
تطبيق تعلم إلكتروني ناجح
الجودة في التعلم الإلكتروني
تحديد مؤشرات لضمان جودة التعليم الإلكتروني
تصميم محتويات رقمية باستخدام برنامج مقدم العروض MS-PowerPoint
تصميم محتويات رقمية باستخدام برنامج مقدم العروض Prezi
تصميم محتويات رقمية باستخدام برنامج Camtasia
بناء بنوك الأسئلة

السيناريو التعليمي
المهارات الرقمية لمعلم القرن 21
الوعي الإلكتروني وتعزيز الممارسات الآمنة للأنترنت
إنتاج الفيديو التعليمي

Ph.D. Thesis Supervision – Naif Arab University for Security Sciences.

Student Name	Title	Main/Co-Supervisor	Viva Date
Abdul Rahman Badjad Al-Otaibi	Title: The Role of Cybersecurity in Promoting Vision 2030	Dr. Ibrahim Mirghani Muhammad Ali (Main)	16/4/2020

Ph.D. Thesis Committees – External Examiner**:**

1. Mariam Busaleh, King Saud University, Density Specific Mass Classification in Mammography Using Deep Learning. Supervisors: Prof. Muhammad Hussain, Prof. Hatim A Aboalsamh
2. Fahad Ali Alharbi, King Saud University, Dynamic Noise Identification and Elimination during Neural Networks Training. Supervisors: Prof. Khalil El Hindi, Dr. Saad Alahmadi
3. Fadl Dahan, King Saud University, Quality of Service Aware Web Services Composition Using Nature-Inspired Algorithms. Supervisors: Prof. Khalil El Hindi, Dr. Ahmed Ghoneim

External Examiner for the Research Project in Masters of Public Health (MPH) – School of Medicine, King Saud University.

1. Hanan Abdul Aziz Al Gotaumel, Effectiveness of Virtual Reality in Improving Oral Health "Consumer Health Informatics", Supervisor: Dr. Ebtissam Al-Madi, Viva Date: 23/12/2019.
2. Sama Alsulihem, Factors Influencing the Effectiveness of Using Flash Glucose Monitoring on Glycemic Control among Type 1 Diabetes in Saudi Arabia, Supervisor: Dr. Hala Alhodaib, Viva Date: 23/12/2019.
3. Afaf Ali Batis, Preferences and Features of a Blood Donation Smartphone App: A Multicenter Mixed Method Study in Riyadh - Saudi Arabia., Supervisors: Prof. Ahmed Albarrak, Viva Date: 18/04/2018.
4. Khalid AlFawaz, Diabetic Patient's Perception of Tele Diabetic Retinopathy Screening and Image Evaluator's Feedback on the Quality and Information Tele Transferred with Retinal Images, Supervisors: Dr Nasriah Zakariah, Viva Date: 18/04/2018.
5. Muteb Alsaadi, Developing and evaluating a web-based platform for telepsychiatry through online videoconferencing technology, Supervisors: Dr. Amr Jamal/ Dr Nasriah Zakariah, Viva Date: 26/12/2017.

Master Thesis Committees – External Examiner**:**

1. Fatma Abubaker, Food Demand Forecasting for a Restaurant Company Using Machine Learning Techniques: A Case Study from Benghazi-Libya, Dr. Ala' Khalifeh, Viva Date: 25/1/2024.
2. Wafa' Qasim Al-Jamal, Jordan University of Science and Technology, Sarcasm Detection in Arabic Short Texts: A Novel Approach Leveraging Pre-Trained Language Models and Addressing The Data Imbalance Problem, Prof. Mostafa Ali, Dr. Ahmad Mustafa, Viva Date: 8/1/2024.
3. Maisa Abedlraheem M. Alasasfeh, Princess Sumaya University for Technology, *Dynamic Cyber Security risk management (intelligence security operation center) using Machine Learning*. Supervisor: Dr. Ashraf M. Ahmad, Viva Date: 17/06/2021.
4. Mansour Sulaiman Alrajhi, Naif Arab University for Security Sciences, Detection of DDoS Attacks in Software Defined Networks. Supervisor: Dr. Prof. Dr. Mostafa G. M. Mostafa, Viva Date: 07/4/2019.
5. Abdulwahab Awadh Almutairy, Naif Arab University for Security Sciences, An Intelligent Classification Model for Malware Detection. Supervisor: Dr. Ahmad Abdulmajeed Elsherif, Viva Date: 01/4/2019.
6. Saad Mohammad Almalki, Naif Arab University for Security Sciences, A New Intelligent Model for Phishing Web Sites Detection. Supervisor: Dr. Nabih T. Arar, Viva Date: 18/4/2018.

7. Reda Ahmed Ali Ibrahim, University of Creative Sciences, تقييم دور الهواتف الذكية والحسابات اللوحية في دعم تعلم برامج تقنية المعلومات بالمعاهد الخاصة (دراسة حالة " معاهد الخليج للتدريب والتعليم في المنطقة الجنوبية بالمملكة العربية السعودية"). Supervisor: Dr. Mohammad Samir Abdelhaq , Viva Date: 14/3/2015.
8. Noor Hussien Awad, Jordan University of Science and Technology, *An Adaptive Differential Evolution With an Ensemble of Parameters for Multi-Objective Optimization*. Supervisors: Dr. Rehab Duwairi, Dr. Mostafa Ali, Viva Date: 20/3/2014.
9. Fuad Sameh Ali Alshraideh, Philadelphia University, *An Approach to Extend WSDL-Based Data Type Specifications to Enhance Web Services Understandability*. Supervisor: Dr. Samer Hanna, Viva Date: 29/5/2013.
10. Ismael Mahmoud Ja'far, Princess Sumaya University for Technology, *Frequency Domain Hybrid Based Image Indexing and Retrieval*. Supervisor: Dr. Ashraf M. Ahmad, Viva Date: 24/01/2012.
11. Mohammad Salameh, Al-Balqa' *Applied University, Analysis and Design of Landmine Detection System Using Mobile Devices*. Supervisor: Prof. Alaa Sheta, Viva Date: 04/08/2008.

Master Thesis Committees – Internal Examiner - The University of Jordan**:**

Student Name	Title	Supervisor	Viva Date
Ala' Mohammed Alsaweir	RECOGNIZING TEXTS OF JORDANIAN ARABIC DIALECT USING MACHINE LEARNING TECHNIQUES	Prof. Gheith Abandah	30/5/2024
Monia Ala'-Aldeen Abdullfattah Nsour	ARABIC SENTIMENT ANALYSIS FOR ONLINE LEARNING AND BLENDED LEARNING IN JORDAN USING MACHINE LEARNING TECHNIQUES	Dr. Mohammad Abd-Alrahman Mahmoud Abushariah	12/2023
Balkees Essa AlShagoor	Analysis and Development of E-Health System for Chronic Disease Management Utilizing Adaptive Human-Computer Interaction Dialogues	Professor. Majid Al-Taee + Dr (Med) Ayman Zayed	30/7/2012
Lamya Omar Nasser Abdullah	Distributed Secure SIP Service over Ad Hoc Networks	Dr. Iman AlMomani	22/12/2011
Eman Mohammad Al-Thwaib	A Comparative Study of Machine Learning Techniques in Classifying Full-Text Arabic Documents Versus Summarized Documents	Dr. Khalil El-Hindi	05/08/2010
Majd Bassam Al-Ashhab	Automatic Test Data Generation Using Ant Colony Optimization	Dr. Khalil El-Hindi + Dr. Mohammad Alshraideh	03/08/2010
Asia Mosa Mohammed Al Saad	Mining Arabic Text Using Association Rules: The Holy Quran as a Case Study	Dr. Khalil El-Hindi + Dr. Bayan abu Shawar	13/05/2010
Oraib Yousef Al-Migdadi	A Spatial Data Structure for Tracking Mobile and Fixed Nodes	Dr. Azzam Sleit	06/08/2009
Dania Ahmad Mohammad Hlayyel	Recognizing Usage Patterns from Jordan University Website Using Self Organizing Map	Dr. Ammar Al Huneiti	14/05/2009
Inas Ismail Abuqaddom	Automated Reallocator of Replicas over Mobile Ad Hoc Networks	Dr. Azzam Sleit + Dr. Wesam Al-Mubaideen	12/05/2009
Badr-Aldeen Mustafa Mansour	Comparative Performance Study of Ultrasound Images Compression Dedicated to Telemedicine Application.	Dr. Abdel Latif Abu-Dalhoum	07/08/2008
Inas Juma	Detecting Fuzzy Duplicates Based on JEDS.	Dr. Azzam Sleit	05/08/2008

Master Thesis Supervision - The University of Creative Sciences**:**

Student Name	Title	Co Supervisor	Proposal Approval Date	Viva Date

Sara Mohammed Al-Huwaimel	أثر التكنولوجيا في تطوير إدارة المشاريع "دراسة تطبيقيه لأراء عينه من مدراء البنوك والشركات في المنطقة الوسطى والشرقية من المملكة العربية السعودية"	None	01/04/2016	

Master Thesis Supervision – King Saud University**:**

Student Name	Title	Co Supervisor	Viva Date
Atallah Al Osaimi	Respiratory Care Supervisors' Satisfaction implementing an Electronic Patient Management System at King Fahad Medical City, Riyadh, Saudi Arabia	None	22/12/2019

Master Thesis Supervision - The University of Jordan**:**

Student Name	Title	Co Supervisor	Proposal Approval Date	Viva Date
Zainab Ali Ismail Darweesh	Investigating the Use of Filtering Techniques to Improve the Accuracy of Discovering Association Rules in Noisy Domains	None	03/1/2013	17/12/2014
Asma' Abd Al-aziz Amro	Using Instance Reduction Techniques For Pruning Decision Trees	Dr.Khalil elHindi	10/1/2012	18/12/2012
Sawsan AL Bakri	An Automated Diagnoses System Based On Blood Vessels Features	Dr.Bashir AlDiri Lincoln University, England	1/1/2011	26/12/2011
Lamia Hesham	Neuro-Fuzzy Classification Using Recursive Deterministic Perceptron	None	1/1/2011	26/7/2012
Ala' Ibrahim Barakat	Using Machine Learning Techniques to Diagnose Glaucoma Disease	None	1/1/2011	27/12/2011
Rodwan Shalalfeh	Best Utilization of Mirroring Server Resources using Artificial Neural Networks.	Dr.Azzam Sleit	23/12/2009	10/8/2011
Anas Liswi	Collaborative Mobile Learning Architecture Based on Mobile Agents	Dr.Iman AlMomani	18/05/2009	26/7/2010
Rami Khawaldeh	Ant Colony Optimization For VoIP Quality Assessment	Dr.Khalil elHindi	26/5/2009	15/7/2010
Dana Mostafa Beidas	Search in Multimedia Databases Using Similarity Distance	None	26/5/2009	13/5/2010
Ala' Fahad Aburumman	Securing SIP over Ad hoc network (Authentication)	Dr.Iman AlMomani	05/05/2009	5/8/2010
Heyam Bader	A Genetic Algorithm Gabor Filtered Optimization for Blood Vessels Detection of Digital Retinal Images.	Dr. Abdel Latif Abu-Dalhoum	02/11/2008	03/08/2009

Capstone Project Master Information (Cyber) Security – Saudi Electronic University**:**

2021 – Second Semester (6+3)

Ahmad Alshammary	Containers, Dockers, and Kubernetes Configurations and Settings Security Issues

SATTAM HELIEL S. ALMUTAIRI	Digital Forensics Analysis of Brave Browser
Ziad Faleh alshammari	Investigation of privacy issues in Zoom conference system
NASSER JARALLAH ABDULKHALIQ ALGHAMDI	Forensic Analysis of Health and Fitness Applications on Android
ABDULLAH ALI MOHAMMED ALDAWSARI	Edge IoT Based Smart Home Passwordless Authentication
MESHAL AWAD M ALENEZI	Enhancing the effectiveness of Web Application Firewalls by configuration and monitoring
TALAL YAHYA SALMAN ALFAIFI	Efficient Communication Security Framework for IoT Networks (Examiner)
SULAIMAN MOHAMMED SULAIMAN ALNASSER	A Comparison of Encryption Algorithms in detecting Man in the Middle Attack in Medical Organizations (Examiner)
ABDUALRAHMAN ALI MOHAMMED JOHARI	Implementing Blockchain-Based for Smart Home Network Security (Examiner)

2021 – First Semester (3 + 4)

ALI ALQAHTANI	Digital Forensics on the Internet of Things (IoT): A CCTV Cyber Attacks and forensics analysis Case Study
Ali Al Ajmi	Cyber Security Governance, Maturity and Models in Emerging Countries
Mohammed Alshalan	Improving the Security of Isolated Networks
Mohammad Alhazani	Detect phishing using machine learning (Examiner)
Khalid Aldehaimi	ML Anomaly Prediction Model for IoT Devices for Edge (Examiner)
Msaad Althaqeb	A Cybersecurity framework for On-demand /Food ordering Services in Saudi Arabia (Examiner)
Abdulqader Alatawi	Improvement of Procedures in Responding to Security Warnings of CERT and Challenges Faced During COVID-19 in Saudi Arabia Organizations (Examiner)

2020 – Second Semester (6+8)

Abdulmajeed Alshunaybir	Botnet Attacks Detection in IoT environemnt Using Machine Learning Techniques
Abdulrahman Almohawes	Android Maleicious Attacks Detection using Machine Learning Techniques Based on Permissions
Ahmed Alshamer	Protected VoIP data in IoT from Eavesdropping Using Encryption
Hamad Alghathber	VoIP Attacks in Internet of Things IoT Environment
Mohammed Alqahtani	DoS Attacks Detection in IoT environemnt Using Machine Learning Techniques
Saud Alghamdi	Android Maleicious Attacks Detection Using Machine Learning Techniques Based on API Calls
Faisal Alhaiti	IoT Security and Data Privacy (Examiner)
Rajeh Alrajeh	Detecting Fake Social Media Accounts Based on AI (Examiner)
Abdullah Alyousef	Preserving Location Privacy in IoT Against Advanced Attacks (Examiner)
Abdulrahman Alshaghdali	Mitigation of vulnerabilities and security threats in Industrial IoT using Fog Computing (Examiner)
Ammar Abdullah	A new comprehensive use of CAPTCHA (Examiner)
Abdullah Altowairqi	Using Machine Learning to Detect Cyberbullying (Examiner)
Ahmed Alsakhri	The use of Identity Based Encryption (IBE) in the Blockchain Access (Examiner)
Abdullah Marghalany	Enhancing password manager application (Examiner)

2020 – First Semester (5+3)

Abdulrahim Assiri	Internet of Things Authentication against Session Impersonation Attack (Co-Supervisor)
Othman Alhudaib	IoT Systems and Networks Forensic (Examiner)

Khalid Alomar	Methods of detecting IoT botnets: empirical study (Examiner)
Younes Alotaibi	Enhancing the Security and efficiency of Database Backup in Cloud (Examiner)
Sultan Alharthi	How Information from Honeypots can be Used to Improve Network Security
Mohammad Almutairi	Modeling Network-Layer Attacks in Wireless Sensor Network
Fares Al Enazi	Abusing iOS Permissions (Co-Supervisor)
Mohammad Bakhamis	Compacting Denial of Service (DoS) Attack in Internet of Vehicle (IoV)

2019 – Second Semester (10)

Faisal Ahmed AlSattam	Rule-based Approach to Detect IoT Malicious Files
Abdullah Hashem Alzahrani	IoT Firewall & Ports Monitoring
Ibrahim Tawfq s Alqoud	Securing Networks Using Honeypots Software Information
Hosam Mohammed Alzahrani	Attack on Turnstile Gates with RFID AND NFC Authentication Protocol
Abdulrahman Mohammed Albatel	Adaptive Learning in Capture the Flag (CTF)
Mohammed Idrees Aldaris	Building DNS Tunneling Dataset
Abdulmajeed Saad Aljulayel	A Dataset for RPL Attacks in IoT
Ahmed Abdullatif Al-Mulla	Trust Management in Internet of Vehicles
Khalid Mohammed Alhusayni	Secure Authentication Protocols in IoT-Based Healthcare Systems Using Body Sensor Network (Co-Supervisor)
Ahmed Ali Motmi	Industrial Internet of Things Trust Management (Co-Supervisor)

2019 – First Semester (3+3)

Fheed Alsubaie	Intrusion Detection System built by Training a Machine Learning Algorithms with a Wireless body area Network (WBAN) Datasets
Ibrahim Alnuman	Machine Learning DDoS detection for Generated Internet of Things Dataset
Anas Al Suwailem	Evaluating Snort alerts as a classification features set
Abdullah Alqahtani	Anomaly Detection based on Supervised Learning (Examiner)
Haithem Babgi	Threat Intelligence Platform (Examiner)
Mohammed Al Jafre	Analyzing Tweets to Have a Better Decision: (SEU) Case-study (Examiner)

2018 – Second Semester (5+4)

Khalid Mohsen Al-Gethami	Factors Affecting the Accuracy of Machine Learning-based Intrusion Detection Systems: An Empirical Approach
Saeed Hamed ALGarni	Malware Analysis (Shammon 3 Analysis)
Ghuasin Rashed AL-Dossri	Digital Forensic Analysis of Snapchat and Instagram on Android Smartphone
Meshal Manfi Alkhaldi	Cyber Threat Intelligence and Cuckoo Sandbox
Ali AlKoudari	IoT Security Based on Machine Learning
Othman AL-angari	Evaluating The Security of Internet of Things in Saudi Arabia: An Empirical Qualitative Study (Examiner)
Abdurrhman Almzru	Property Trespassing Prevention Using IoT Technology (Examiner)
Omar Alqahtani	Smart Meter Privacy: A Trade-off Benefits Framework (Examiner)
Faisal Al-Ajmi	Web Server Honeypot with Machine Learning (Examiner)

2018 – First Semester (3+2)

Feras J. Alamri	Network Security, Web Application Security and Digital Forensics
Khaled Almanea	Web Server Honeypot with Artificial Intelligence Reporting

Mohammed ALsahli	Machine Learning Wired / Wireless networking attacks dataset classification
Mohammed Almanea	Implementation of Blockchain Technology on Healthcare Sector in Saudi Arabia: An Empirical Qualitative Study (Examiner)
Mohammed A. AlQahtani	Dynamic Malware Analysis by Cuckoo Sandbox (Examiner)

2017 – Second Semester (2+1)

Faisal M. AlSuhaimi	Designing VoIP Network to Compare and Analyze the Performance of Different Codec and Different Encryption Algorithms
Abdulaziz I. Al-Issa	Denial of Service attacks over Wireless Sensor Networks
Abdullah M. Alelyani	Reverse Engineering of WannaCry Ransomware (Examiner)

2017 – First Semester (4+1)

Khalid M. Aldalilah	Ransomware: History, Attributes and Mitigation
Mohammed Al Jutail	The Dangers Associated With Mobile Applications Permissions
Badr Ahmad Aleidi	Using Blockchain Technique to Validate Integrity and Confidentiality of Backups Versions
Sultan Almalki	Security Risk Assessment at MOI
Hitham S. AlQadheeb	Automated Cuckoo Sandbox System (Examiner)

2016 – Second Semester (3+1)

Waiel Mohammed Eid	NCSC Framework for Mass Scanning KSA Network (Edge Project)
Fahad Ahmed Al-Naeem	Securing Open Government Data
Mohammed Abdullah AlMadhi	Proposed Framework for Information Security Policy Adoption in Saudi Small and Medium Enterprises (Examiner)
Mohammad Mansour Alshaer	Cybersecurity Concerns in TELCOs Migration to SDN & NFV

2016 – First Semester (Security assessment case studies) (6)

Badr Alogaili	ARASCO's Risk Assessment
Abdulelah Almarzouq	Security Risk Assessment at MOL
Bander Abdullah AlQahtani	STC Portal Risk Assessment
Abdullah Alhurair	SFHP Information Security Risk Assessment
Bandar Fahad Alqhtani	SFG Information Security Risk Assessment
Abdulaziz E. Nassruldin	Risk Assessment for Ministry of Civil Services

2015 – Second Semester (Security assessment case studies) (14)

Ali Mohammed Al Garni	IT deanship in Imam Mohammed Ibn Saud Islamic University
Nasser Alotaibi	Information Security Risk Assessment for Saudi Post's Network
Yasser Alzeer	KACST- National Center for Remote Sensing Technology- Information Security Analysis of Controls and Improvement
Ahmed A. Al Mangour	ELM Company
Faleh H. Alshammary	QASSIM Distribution Department (QDD)
Fahad Eid Almutairi	Risk Assessment of ELM Internal Threats & Vulnerabilities
Abdullah Al Zakry	Information Security in KSAU-HS
Khalid S. Al Medbel	Health Care Systems Security
Mosaab Alharbi	Saudi Aramco
Ali M. Al-Subaie	Cyber Security Transportation Company Assessment Project
Khalaf Saeed Alharthi	FSF Information Security Risk Assessment
Abdullah Alshamrani	Securing IT Infrastructure for PID
Mohamed AlMohassen	Network Security Assessment for KACARE
Tariq Al Tuwairqi	South of Riyadh Hospital (SORH)

Supervised Graduation Projects per Year

2023/2024

Third Semester

1. UJ Safety

   Teeba Ratib AL MANASEER (0208930), Jehad Ghunaim (0200818), Zaid Othman (0207133), Yousef Alnabelsieh (0209157)

   Supervisors: Dr. Mousa Al-Akhras, Ms. Lubna Naser Eddeen

   Abstract:

Second Semester

1. RoboGuide: Autonomous Voice-Controlled Mobile robot with SLAM-based Navigation

   Mohammad Al-Najjar (0207904), Hasan Barjawi (0207670), Farah Al-Sadi (0204323)

   Supervisors: Dr. Mousa Al-Akhras, Prof. Nadim Obeid

   Abstract: The project presents the design and implementation of an autonomous mobile robot (AMR) integrating voice-command control with simultaneous localization and mapping (SLAM) navigation using the Robot Operating System (ROS). The system is equipped with 2D LiDAR for environmental mapping and obstacle detection, alongside a robust speech recognition module for real-time voice commands. The core objective is to achieve seamless human-robot interaction for efficient and intuitive navigation within dynamic environments. We employ the Adaptive Monte Carlo Localization (AMCL) method and the Dynamic Window Approach (DWA) for precise localization and path planning. Extensive testing in varied indoor settings demonstrates the robot's ability to accurately interpret voice commands, navigate to specified locations, and avoid both static and moving obstacles. Our findings highlight the potential of combining voice-controlled interfaces with advanced SLAM algorithms to enhance the autonomy and user-friendliness of mobile robotic systems. The insights gained from this project pave the way for further advancements in human-robot collaboration and intelligent automation.

2. Maham: Efficiency Unleashed

   Yahya Haddadeen (0193039), Noor Alswaeer (0214509), Marah Nafoukh (0198009), Mohammed Naji (0209871)

   Supervisors: Prof. Hazem AlHiary, Dr. Mousa Al-Akhras

   Abstract: Many developers' task management processes rely on a combination of manually edited spreadsheets, emails, and verbal communication, leading to a lack of centralized task visibility, miscommunication, and delays in task completion. Such scattered approaches often result in project bottlenecks and decreased overall efficiency.

   While some teams have adopted individual task management tools, the lack of a unified system creates challenges in sharing project status updates and resource allocation. This fragmentation hampers cross-team collaboration and makes it difficult for management to have a comprehensive view of ongoing projects.

   Our objectives at Maham are to centralize task management to provide a clear overview of ongoing projects and pending tasks. Improve communication and collaboration among team members, fostering a culture of transparency and accountability. Optimize resource allocation by ensuring the right tasks are assigned to the right individuals based on their skills and availability. And enhance project tracking and reporting, enabling data-driven decision-making and timely project completion.

3. Mestaghni

   Yara Al-Rbehat (0203422), Ghaliah AbuHejleh (0202565), Heba Al-Rimawi (2200416), Monia Dahnoon (2200593)

   Supervisors: Dr. Mousa Al-Akhras

   Abstract: In today's globalized market, the dependency on foreign products presents challenges to local economies, including Jordan. To address this issue, our project, named "Mestaghni", aims to empower Jordanian consumers and local businesses by providing a platform that showcases alternatives to foreign products available in the Jordanian marketplace. Through "Mestaghni", users can discover local substitutes for foreign goods, thereby supporting the growth of local industries and reducing dependency on imports. The platform incorporates features such as a comprehensive database of products, a user-friendly

chatbot interface for assistance, and a dynamic recommendation system based on user behavior. Furthermore, "Mestaghni" I aspire to evolve into an online marketplace, allowing users to not only discover but also purchase local alternatives directly through the platform. With the potential addition of an Arabic version, "Mestaghni" seeks to extend its reach beyond Jordan, catering to a wider audience across the Middle East. Through these initiatives, "Mestaghni" endeavors to promote economic resilience, sustainability, and consumer empowerment in the region.

4. Machine Learning-Based Clustering of Sepsis Patients in Intensive Care Settings
   Bushra soud Ali Al-Zeirah (0189040), Rama Marei AlMrahleh (0200609), Razan Nuaman Otoum (0208090), Hala Raed Nassar (0204802)
   Supervisors: Dr. Mousa Al-Akhras, Dr. Ali Alrodan, Dr. Laith Al-Omari
   Abstract: Sepsis is a critical condition characterized by high prevalence and mortality rates. Early identification of sepsis presents difficulties due to the absence of specific markers and its diverse causes. Despite numerous studies and efforts, the complex nature of sepsis and the variability in its clinical presentation have left significant gaps in effective diagnosis and treatment strategies. This study leverages advanced machine learning techniques, specifically Gaussian Mixture Models (GMM), to categorize sepsis patients into clinically meaningful subgroups based on the rich dataset from the MIMIC-IV database. By employing rigorous statistical analysis and hyper parameter optimization, we identified distinct patient clusters, each with unique clinical and demographic characteristics. The study further utilized a CatBoost classifier to predict patient outcomes, with SHapley Additive explanations (SHAP) analysis providing insights into the factors driving model predictions. Our findings underscore the potential of AI-driven clustering to enhance sepsis management by facilitating personalized treatment strategies, ultimately aiming to improve patient prognosis and healthcare delivery for sepsis. However, the persistent challenge of accurately identifying and managing sepsis in a diverse patient population indicates the need for continued research and innovation in this field.
5. MedLaVIN: A Biomedical Mixture-of-Modalities Multimodal LLM
   Basel Anaya (0208560), Osama Awad (0206505), Subhi Abduallah (0207851), Abdelrahman Alkhatib (0200756)
   Supervisors: Dr. Ali Rodan Dr. Mousa Al Akhras
   Abstract: In the ever-evolving landscape of healthcare, medical professionals often confront intricate diagnostic challenges that ne- cessitate the analysis of diverse information sources, including medical images and reports. To address these complexities, we introduce MedFormer, an innovative Biomedical Vision-Language Model augmented by a RAG System. MedFormer harnesses the synergistic capa- bilities of cutting-edge technologies, including [1]Idefics2, [2]LLAMA-3, and [3]Citrinet-512, to seamlessly integrate textual, visual, and auditory data, thereby advancing both biomedical research and patient care delivery. MedFormer's standout feature lies in its advanced multimodal proficiencies, which heighten the integration and interpretation of medical data. This empowers healthcare practitioners to con- duct more accurate and efficient analyses of medical imagery, generate automated reports with enhanced precision, and receive insightful answers to complex inquiries. Consequently, MedFormer expedites the diagnostic process, elevates the quality of information available to healthcare professionals, and ensures the accessibility of medical data for all patients, including those with visual or auditory impairments. By uniquely amalgamating vision and language processing capabilities, MedFormer not only bolsters patient outcomes but also ignites the curiosity of researchers, practitioners, and enthusiasts to explore uncharted territories in biomedical information synthesis and narrative creation. With MedFormer, the healthcare community can envision a future where technology streamlines healthcare delivery, enhances efficiency, and enriches the patient experience.
6. FirstAid – Aid Hub
   Lana Al-Jalamneh (0192240), Leen Al-Shalout (0202544), Samia El-Ajou (0203988), Nadin Alhassan (0204196)

Supervisors Dr. Bilal Abu Salih, Dr. Mousa Al-Akhras

Abstract: In a world filled with challenges and risks, access to medical information and first aid knowledge has become crucial. Medical emergencies and natural disasters are an integral part of our daily lives, making preparedness to handle them of utmost importance. However, many individuals may find themselves unable to provide assistance in emergency situations due to a lack of access to accurate information and the necessary skills at the right time.

Therefore, we decided to embark on our new project, "AidHub", with the aim of providing an effective and innovative solution to this pressing need. Our project aims to provide a comprehensive online platform for first aid education, empowering individuals to acquire the necessary skills to confidently and effectively respond to emergencies.

The idea behind "AidHub" stems from the growing realization of the need to provide reliable and easily accessible medical information to everyone. Medical emergencies do not wait, and accidents can happen at any time and in any place, so everyone must be prepared to face these situations with confidence and speed. However, with the abundance of conflicting advice and lost information on the internet, individuals may find it difficult to identify accurate information and follow the necessary procedures correctly in emergency situations.

We believe that knowledge is the key to proper action in emergency situations, and we are committed to providing the necessary means to enable everyone to acquire these vital skills.

First Semester

1. ARABICARENA (Teaching the Arabic language for non-Arabic speakers-Phase 2)
   Nizar Dabouqi (0205752), Ahmad Alsous (0201935), Mohammad Abdel Jawad (0202081),
   Supervisors: Dr. Mousa Al-Akhras, Dr. Khair Eddin Sabri
   Abstract: This project introduces a digital platform tailored for non-Arabic speaking students at the University of Jordan, aiming to facilitate their journey in learning the Arabic language. Our approach uniquely integrates adaptive learning based on proficiency levels, a comprehensive suite of interactive tools, and a user-centric design. Through meticulous requirements gathering, including surveys, interviews, and observations, the developed platform addresses real-world challenges faced by students. The design phase employed a range of methodologies, culminating in a blueprint that prioritizes both functionality and user experience. We anticipate that the platform will be positively received by the target audience. By focusing on adaptive learning and interactive tools, the platform is poised to bridge the language gap effectively. Moreover, its emphasis on fostering cultural understanding positions it as a potential game-changer in the educational landscape of the university.
2. Testbed-based Secure V2X communication system. AbedAlAziz AlHusni (0208047), Ahmad Saadeh (202589), Haitham Hammouri (0206594), Zaid Taha (0185508),
   Supervisors: Dr. Iman Almomani, Dr. Mousa Al-Akhras
   Abstract: In the rapidly evolving landscape of the Internet of Things (IoT) and smart cities, this project pioneers the development of a tangible and practical testbed-based system.

   The primary objective is to establish a secure communication framework, particularly within Vehicle-to-Everything (V2X), allowing vehicles to communicate securely and seamlessly interface with various entities.

   The project's initial phase involves meticulously constructing diverse threat models designed to encapsulate potential vulnerabilities within the IoT and smart city ecosystem. These threat models serve as a foundational understanding of the risks that may compromise the integrity and security of V2X communication.

   Moving beyond theoretical constructs, the project takes a practical approach by showcasing the real-world impacts of the identified threat models. The research provides valuable insights into the potential consequences and risks associated with insecure V2X communication through simulation and analysis.

   To fortify the system against these threats, the project introduces and implements a spectrum of security solutions. These countermeasures encompass advanced cryptographic protocols, robust authentication mechanisms, and innovative intrusion detection systems. The overarching goal is to establish a resilient and secure communication infrastructure capable of withstanding the dynamic challenges of the intelligent city environment.

   In conclusion, this project significantly contributes to the field by addressing theoretical aspects of security and translating these insights into practical, deployable solutions. Through the development

of a natural testbed-based system, the research aims to set a benchmark for secure V2X communication, paving the way for enhanced safety and reliability in the IoT-enabled intelligent cities of the future.

3. Automated Data Entry for Dental Clinics through Deep Learning Analysis of Panoramic X-ray Images.
   Mohammad Naim Samih Daoud (0190707), Hiba Mohammad Abdel Jalil Qatawneh (0205334) Project Supervisors: Dr. Mousa Al-Akhras, Prof. Nadim Obeid, Miss. Lama Rajab.
   Abstract: This research paper delves into the automation of data entry for dental clinics through the application of deep learning neural networks. Specifically, Mask-RCNN instance segmentation and a Keypoint detection model are employed as the core models. The Mask-RCNN instance segmentation model achieves a commendable loss score of 0.37, while the Keypoint detection model attains a significant 0.8 loss. These models are adept at processing panoramic X-ray images, producing CSV files that encapsulate object-level information for the instances predicted within the images. The utilization of advanced deep learning techniques ensures efficient and accurate data extraction. The automation of data entry in dental clinics is pivotal for enhancing operational efficiency and minimizing manual workload. The findings presented in this research demonstrate the feasibility and effectiveness of employing deep learning neural networks, particularly Mask-RCNN and Keypoint detection models, in streamlining data entry processes for panoramic X-ray images within dental clinic settings. This approach not only showcases the potential for automation in healthcare data management but also contributes valuable insights for the integration of deep learning technologies in dental practice, fostering advancements in the broader field of healthcare automation.

2022/2023

Second Semester

1. JU Archive
   Aseel Mohannad Al-Daqqa (0195040), Lina Youssef Hilo (0197853), Nour Ihsan Haider (2190225), Sahar Hesham Abazeed (0191758)
   Supervisors: Dr. Mousa AL-Akhras, Prof. Ammar Huneity
   Abstract: Considering the difficulties that are faced in the process of searching for old documents that people need; we developed this product. The view is to create a website which is mainly concerned with easing the searching process of old handwritten documents. In addition to facilitating the process of adding new documents and updating existing documents instead of doing that manually, as they currently do in the Centre of Archives, Manuscripts and Bilad Al-Sham Studies, which is located in the campus of the University of Jordan. Therefore, this project is customized to meet the centre's needs and solve their problems.
   We created a web-based platform designed to improve the accessibility and management of documents. The documents key information, as well as, their scanned images are then stored in a database, where they can be easily searched, updated, and added to. The platform has a user-friendly web interface; that is designed for a satisfying user experience. This will be a powerful tool for an organization seeking to control their archives electronically and streamline document management processes.
2. JU Best (Teaching the Arabic language for non-Arabic speakers-Phase 1)
   Abdel Rahman AlJaloudy (2190788), Abdel Rahman Alfar (0195744), Monther Omari (0183255)
   Supervisors: Dr. Mousa AL-Akhras, Dr. Majdi Sawalha
   Abstract: The Language Center at the University of Jordan has recognized the need for an effective eLearning platform to teach the Arabic language to non-Arabic speakers. To address this need, we have undertaken a project to develop a comprehensive website that facilitates the learning process for students and supports teachers in delivering high-quality content.
   Our eLearning program is specifically designed for individuals who do not have prior knowledge of the Arabic language. Whether you are an absolute beginner or have some familiarity with the language, our platform caters your needs. We offer a wide range of features and resources that make the learning experience engaging, interactive, and accessible.
   At its core, our platform focuses on three main levels of Arabic language proficiency. Through carefully crafted lessons and exercises, we aim to provide a solid foundation for non-Arabic speakers to develop their language skills. Students can progress through these levels at their own pace, allowing for a personalized learning experience.
   One of the key features of our eLearning program is the systematic approach to teaching Arabic letters, words, and short sentences. We understand the importance of mastering the fundamentals, and

our platform provides comprehensive lessons to ensure a strong grasp of the language's building blocks. Additionally, we offer quizzes and interactive exercises that reinforce learning and enable students to assess their progress.

To enhance the learning process, we have integrated videos and short stories into our platform. These resources expose students to authentic Arabic language usage, cultural nuances, and real-life scenarios.

The materials, including words, sentences, and stories, available on our eLearning platform are carefully curated and uploaded by experienced teachers from the Language Center at the University of Jordan. These dedicated educators bring their expertise and knowledge of Arabic language instruction to ensure that the content is relevant, accurate, and of high quality. By entrusting the creation of materials to our qualified teachers, we guarantee that students have access to authentic and reliable resources that reflect the language's nuances and cultural context. The contributions of our language center teachers play a crucial role in the success of our eLearning program, enabling non-Arabic speakers to learn Arabic effectively under the guidance of experienced professionals.

3. Safety lab instruction

   Medhat Al Rafati (0192069), Haneen Al Shanteer (0191982), Alia Hajjar (0199728)

   Supervisors: Dr. Mousa AL-Akhras, Dr. Hamad Sawalqah, Dr. Thaer Hamtini

   Abstract: The development of a user-friendly website that offers instructional videos on safety procedures and equipment usage in chemistry and biology labs is crucial for promoting safety and enhancing the learning experience of students. This project aims to address the problems of limited safety knowledge, lack of resources, inconsistent instruction, time constraints, and lack of confidence by providing detailed and interactive instructional videos. The website features a comprehensive database of safety procedures and equipment usage, high-quality instructional videos, and an intuitive design accessible to all students. The objectives include creating a reference guide, promoting safety awareness, enhancing the learning experience, and evaluating the effectiveness of the website through feedback. By providing students with proper safety training and guidance, this project seeks to reduce accidents, improve confidence, and ensure that students are adequately prepared to perform experiments safely and efficiently in both chemistry and biology labs.

2021/2022

First Semester

1. Ahmed Fahad Alghamdi, Turki Meshal Bintwalah, Naif Nasser Alkathiri, Abdulaziz Ali AlTayyar

   Takween

   Details:

   The project aims to save effort and time for searching for a skillful team or employee to work on the project and make our idea successful by getting investors. In this project, we are going to build an application that will connect skillful users and teams to different entrepreneurs, project owners, companies, and investors to work on their ideas. The skillful user, employees, or company will publish their services for entrepreneurs or investors, so investors can search and proceed with the project with the collaboration of an expert team.

   The project will increase economic growth in the country by taking money into the country and in professional growth the skillful person can do their best by performing on challenging project ideas. The proposed website provides an opportunity for entrepreneurs and young people to benefit from their ideas and skills and connect them to form a works team and build a start-up company. The user can be more successful by getting an investor for working on a project and in this way both parties can have long-term coordination for work on future projects.

   Sometimes we need a team of high experts to make our idea successfully implemented, but due to limited resources we may not find anyone. On the other hand, many people have a great idea to work, but they do not have the resources to make it achievable. So, this website provides opportunities to both users who need skillful person or team and who need investment to work on their project. With the help of this project, we can connect people more closely and this project plays an important role in the development of the information technology industry.

2017/2018

Second Semester

1. Ali Juman Alzahrani, Sultan Abdullah Alraqi, Sami Saoud Alonazi, Rani Murshed
   Conference Management System Arabization (CMSA)
   Details: Web Conference Systems (WCS) is a Web publishing tool for scientific conferences.
   EDAS and Easy chair are examples of such systems.
   The idea of the poject is to provide an Arabic version of such systems for Arabic users with at least the following features.
   - Free Registration for conference organizers, authors and reviewers
   - Electronically submit, review, accept or reject papers.
   - Allow paper submitters to edit their work and submit a revised version.
   - Change paper status.
   - Contact authors and reviewers by integrating email submission facility.

2015/2016

Second Semester

1. Waleed S. Khorynek, Saeed H. Al Garni, Imam I. Mohammed
   E-Tourism: Visit KSA
   Details: The purpose of the project is to develop a web-based application for Kingdome of Saudi Arabia Visitors application by utilizing the knowledge and skills gaining from this subject and a web site that links to the tourist database to retrieve tourist information. This project is chosen due the lack of specialized websites that can reveals the hidden tourism sites located in Saudi Arabia.
   The proposed system maintains a centralized repository of all related information such as places, hotels and Restaurants. The system provides all the help and information that a customer generally requires. The system allows one to browse through all the details and information.

2013/2014

Spring Semester

1. Gaith Bassem Awwad - Saad Marwan Al-Khatib - Anas Joban
   Business Link
   Details: The idea of e-business system came after a growing number of interested people with doing business and activities over e-channels. There are potential gaps or weakness in traditional business activities that have been studied and analysed by our team, thus we discovered that business needs such a system to overcome all problems and make all business activities and needs easy and flexible through the use of web. Business link is a good idea to take the world to a new approach in the business process, and to increase the number of successful business over the world. Thus the e-business system will help us to perform.
   Business Link focuses on studying traditional business activities and to make sure that peoples share their business interests and ideas effectively. This will also produce:
   - Less effort and less labour-intensive, as the primary cost and focus primary on creating, managing and running a secure web business portal.
   - Increasing number of businesses as individuals will find it easier and more convenient to participate, especially those abroad.
   - The e-business system to be discussed serves business men, sponsors, people who has workable ideas.

2. Danya Al-Ramamneh - Sara Botai - Yasmeen Irshaid
   Baby Care
   Details: There are many applications that help the mother to take care of her baby, but as far as we know there is no application that connects the mother with the baby's doctor.
   Baby care application is an android application. This application assists the mother in taking care of her baby and keep him/her healthy by tracking his/her weight, height and head circumference and the application shall also remind the mother of all her baby's vaccines and tell her exactly what are they for. It also suggests to her the right foods for each age group. The mother can also contact her doctor anytime for any problem she has with her baby. The app shall also diagnose an illness depending on given symptoms.

3. Malek Abu-Salah - Wa'el Abu El-Hawa - Salim Abu El-Hawa - Nour al-deen al Neser
   JU Tour
   Details: JU TOUR is a 2D arcade game, where you play in front of the building of King Abdullah II School for Information Technology, The University of Jordan. The objective of the game is to learn more about KASIT faculty by collecting information and answering questions about the faculty.
   During the game, the player attempts to collect as many coins as possible to increase his/her score, look for books with different colors to get information about the departments of the IT faculty. Use the information needed to answer the questions appears at the end of each level. Answer these questions correctly to progress to the next level. **Technology:** JU TOUR is developed for both the web and PC (Windows), using Unity Game Engine (Version 4.3.4f1). For the web version of the game, it is required to have a web browser with Unity Web Player installed on. You can find the latest version at: http://unity3d.com/webplayer. Programing languages used: C# and JavaScript.

Fall Semester

1. Tareq Ghawanmeh_Tarik Al-Zyoud_Loai Modallal
   Pictor: Image Editor
   Details: As there are few complete image-editing applications available in the android market today, we felt that there was a need to create a complete, yet simple and fun image-editing application for android users.
   To fulfil this we decided to include all the standard functions and filters an image editing application should have, while providing a simple and easy-to-use interface, moreover we tried to make it as much fun as possible.
   The application will allow you (the user) to select an image from either your gallery or by capturing it using your mobile camera or import it from the gallery application, and then give the user the ability to apply a variety of effects. Such effects include inserting shape, text, clip-art, adding filters (such as Black and White), Negative and Grayscale, providing you with a fun and interactive application for your android device, while learning about the filters you are using.

2012/2013

Spring Semester

1. Mahmoud ALShtayyat__Mahmoud Alqam__Ehab Anan
   JU Navigator
   Details: The objective of the project is to design an application to guide students to the places of interest inside the university such as restaurants, public facilities, parking, and tourist attractions in addition to many other important places in the university using GPS technology through smart phones. The project has been designed on android platform and consists of SQL Lite as a database.
   Our motivation for this project came from our understandings of our responsibilities towards the society and the university society in particular also our strong urge to learn the development of Android applications which is one of the fastest growing technologies in today's world.
   The project consists mainly of two types of users: normal users and users with special needs, where the user can use this application to choose his/her destination inside the university campus, the application will display the map using Google Maps and uses GPS to get the user's current location also uses the speech synthesis and recognition techniques to give the user the best experience.
2. Nisma Gafer_0097430_Laila Ba'alawi_0098892_Amal Al-soudi_0053462_Yasmeen Al-Tayeh_0091466
   Human Resources Management over android applications
   Details:
   This project is a part of human resource management systems where two important modules are implemented. These are leave request and announcement. These applications allows the employees easily and formally manage their leave requests and check a new announcement anywhere and anytime and they can quickly and easily submit and check the status of their leave requests right from their Android Smartphone, helping the manager and employee better manage their time off.

2011/2012

Spring Semester

1. Abdallah AlQurashi_

HeliRobot

Details:

HeliRobot Q1 Project is a prototype for a small helicopter that can be used for military, police, discovery, civil and spy applications and more.

The word ”HeliRobot” comes from two words “Helicopter” and “Robot” and we can call it a Robot because one of the project aims is to develop a helicopter that can complete any task was assigned to it independently without any human assistant (intervention).

In this project the first step of building a discovery helicopter was completed by making the ability of controlling the helicopter via a computer using Joystick or via an Android device using its accelerometers, in the case of controlling it using the computer the Android device will be mounted on the helicopter and will send to the computer the speed, location, heading, orientation (Balancing) and the height of the helicopter, the Android device can broadcast the video captured by the camera to the computer, that allows the person to control the helicopter to fly without watching it, just by looking to the screen of the computer.

Fall Semester

1. Haneen Ismail_ 0096673_Mohammad AL-Heet_0080782

   Over Head Crane

   Details: Most manufacturing plants contain warehouses as an essential place for storing, keeping and retrieving products. This process should ensure the safety of the goods; not to become defected, automating the process is the goal most leading industrial companies are aim for in several industrial fields. Our winching system aims to automate the process of storing and retrieving the products to save time and budget allocated for that purpose in an industry. The system consists of three primary hardware components that work together to achieve the system goals; the first component is the input device which contains sensing device to determine if there is a product to store, the output device which contains sensing device and assembly line to get the item out of the warehouse and finally the crane which moves in all direction to achieve its goal of moving the items from and to the warehouse.
2. Razan Ameen_ 0084593_Haneen Al-Bitar_0084636

   Quick Solver: Incident Managements System

   Details: Incident management system is part of the Service Support Functions of the ITIL which is the most widely adopted approach for IT Service Management in the world. It provides a practical framework for identifying, planning, delivering and supporting IT services to the business. Incident Management System is a very critical part in any organization that provides services or products to customers. It helps the organization to restore credibility. *Quick Solver* is a user-friendly, easy to use Incident Management System that meets all the Incident Management System requirements. Using our system it is now easier to record, classify, investigate and resolve Incidents like ITIL suggest.
3. Yaman Al-Kamaly_0071096

   Moodie

   Details: An intelligent mobile application that attempts to change user’s mood through suggesting some places to visit. The suggestions are based on previous visits by the user, his/her rating, mood criterion, and nearby places to his/her current location. Moodie can also access the user’s Facebook’s account to access friends’ locations and check in places, friends can also know his/her locations.

   Moodie was applied on Windows phone 7 utilising a number of services such as Bing maps, Silverlight, Windows Communication Foundation. Moodie can be extended to iOS and Android.

2010/2011

Fall Semester

1. Safaa Ahmad_0087479-Rawand Abu Roza_0080829

   Neural Iris Signature Recognition (NISR)

   Details: The idea of the project is to develop a system that is able to recognise people based on their iris image. The proposed system is based on an Artificial Neural Network model.

2009/2010

Spring Semester

1. Maisa Fuqaha_0086616-Diana el Qaisi 0059198

   Intelligent Special Needs System

Details: The idea of the project is to help deaf people in communicating with normal people through a system designed to translate deaf people sign language into spoken sentences and to translate normal peoples' speech into signs understood by deaf people.

2. Rakan Al Yaman-Ruba Abu Hammour
   Landmine Detection System
   Details: The idea of the project is a prototype LEGO NXT robot developed to explore an area with landmines by using light and temperature sensors.

Fall Semester

1. Dua'a AlZawahra_2060084_Muna Fannoon_0067303_Sawsan Al Mahmoud_2060325
   i-Bot System
   Details: The idea of the project is to help in classification problems in a factory setting. In the proposed scenario there is a production belt where CANs of certain products (soda for example) are run over the belt. A robot arm will handle the CANs according to the following classification criteria (Appropriate or defected) and (Big or Small) and (Yellow or Orange). By doing so the proposed system helps in automating the processes in the factory rather than having a specialised factory worker(s) to do this repetitive task.
   The system composed of the following components: A running belt, a robot arm that does the classification, two cameras that take shots of the current CAN and an Image processing component to help in the calculations. The pictures taken by the cameras are transferred to a computing device (a computer with image processing capabilities). Then the computer does certain calculations (image processing) to classify the current CAN. An order is then sent to the robot arm to do the classification appropriately
2. Mahmoud Yassin_0050718_Tariq Jahaf_2051619
   Mobi-Shop
   Details: A mobile agent based system to aid in quick navigation of different products within a shopping mall.

2008/2009

Summer Semester

1. Reem Al-Fayez_0067336_Rawan Al-Rihani_0068775
   Details: E-School Management System

Spring Semester

1. Bayan Jamal Almemeh_0057432
   KASIT Mobile Quiz
   Details: Mobile Quiz using J2ME
2. Braah Kassab_0057430_Doaa Qwasmi_0057438_Hanady Abu-Lihyah_0057501_Taghreed Khresat_0057434
   Details: Customer Relationship Management (Mobile Banking)
3. Eman AlBana_0050695_Razan Al-Ansari_2060063_Ola Al Siksik_0057465_Hana Al-Adham_0057500:
   Mobi Lecture
   Details: A mobile lecturing system to stream video lectures to mobile devices.
4. Yasmeen Hesham_0057504_Manal AlMunnayer_0057484
   Map Builder using Robot Movement
   Details: A system was built to track robot movement using LEGO NXT and MATLAB.

Fall Semester

1. Afnan Anaya-0057425:
   Details: E-Conference Management System
2. Ala abdalaat-0057519-Hadeel Samara-0051302
   Details: Copyrights Protection Tool: Secure PDF Reader (SPRS)
3. Mohammad Abu Qaoud-0056632-Hamzeh Elees-0057525
   Dynamic Smart home system
   Details: Build a smart House System involved hardware and software.
4. Noor Jaber-0057491-Rawan Abu Zaid-0057446
   Robotics Library Assistance System (RLAS)
   Details: A prototype for a library assistant was built using Lego NXT.

2007/2008

Spring Semester

1. Abdullah Jaouni _Kareem Meteb _Rami ElZeer
   UJ Multimedia Conferencing Using Protocol.
   Details: Multimedia Voice and Video Conferencing System using SIP Protocol and Implemented Using Java programming language.
2. Amer Salameh_0031427
   Details: Amman city GIS tourists guide.
3. Zaid Rachwani_Ibraheem Hameed
   Web-based TV broadcast
   Details: Development of a Web-based IPTv streaming website.

Fall Semester

1. Students: Geith AlQurashi-0053151
   Details: Development of a Microsoft SharePoint website.

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