

Tamam Alsarhan



Ph.D. in Artificial Intelligence- Computer Vision
Department of Computer Science and Engineering
Shanghai Jiao Tong University (SJTU)

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About me...

I am an Assistant Professor at the University of Jordan. Previously, I worked at the Key Lab of the Shanghai Education Commission for Intelligent Interaction and Cognitive Engineering in China, and conducted research as a visiting scholar at Khalifa University in the United Arab Emirates. My academic background includes a Ph.D. in Computer Science - Artificial Intelligence from Shanghai Jiao Tong University, which is recognized as one of the top universities worldwide, and ranked 46th globally on the QS ranking in 2022. As a dedicated and passionate professional in the fields of Deep learning, and computer vision, I am committed to applying my skills and knowledge to drive innovation and solve complex problems. With a solid educational background and extensive experience working in the vision lab, I developed innovative human action recognition models based on deep learning techniques to accurately detect human movements within videos.

Areas of specialization

AI	Machine learning	Deep learning	Computer vision	Data science	Data mining
Motion recognition		Algorithms	Image matting		Video understanding
Object detection	Image segmentation		Image inpainting		

Education

Shanghai Jiao Tong University (SJTU), Shanghai, China

Ph.D. Student, Computer Science, 2018 to July 2022

Supervisor: Hongtao Lu

Thesis title: Vision-based Human Action Recognition using Deep Learning

M.S., Computer Engineering, 2018, Jordan University of Science and Technology (JUST)

Supervisor: Luay Alawneh

Thesis title: Evaluating Bidirectional Gated Recurrent Units for Human Action Recognition using Accelerometer Data Captured by Smartphones

Academic Employment

Assistant professor

The University of Jordan, Dept. of Artificial Intelligence, 2023, September - Present, Amman- Jordan

Duties:

- Design and develop course materials, including syllabus, lesson plans, and instructional resources. Ensure that the curriculum aligns with the learning objectives and meets the requirements of the academic institution or department.
- Deliver engaging and effective lectures or facilitate interactive discussions to impart knowledge and engage students in the subject matter. Use a variety of teaching methods, such as multimedia presentations, case studies, group activities, and hands-on exercises, to enhance student learning.
- Maintain a positive and inclusive learning environment by managing class discussions, encouraging participation, and promoting respectful interactions among students.
- Conducting high-quality research in AI.
- Engaging in scholarly activities and academic service.

Assistant professor

Applied Science Private University, Dept. of Computer Science, 2022, August - September, 2023 Amman- Jordan

Visiting researcher

Khalifa University - Electrical Engineering and Computer Science department- 2023, February - Present, Abu Dhabi, United Arab Emirates

- I have been invited by Khalifa University to conduct research on skeleton-based action recognition. Recognizing the importance of advancing the field of computer vision and artificial intelligence, Khalifa University has extended this opportunity to delve into the fascinating area of analyzing human actions through skeletal representations. This collaboration presents an exciting prospect to explore innovative approaches, develop novel algorithms, and contribute to the growing body of knowledge in the field. I am eager to leverage my expertise in computer vision and machine learning to make meaningful contributions to this research endeavor and foster advancements in skeleton-based action recognition.

Part-time lecturer

The University of Jordan, Dept. of Business Information Technology, 2022, Oct - Present, , Amman- Jordan

Duties:

- Teaching undergraduate courses.
- Contributing to curriculum development.

Researcher

Shanghai Education Commission for Intelligent Interaction and Cognitive Engineering 2019, May - June, 2022, Shanghai- China

Duties:

- Conducting research: Engage in independent and collaborative research projects focused on human action recognition. This involves designing and implementing experiments, collecting and analyzing data, and interpreting research findings.
- Literature review: Stay abreast of the latest advancements and developments in the field of intelligent interaction and cognitive engineering by conducting thorough literature reviews.
- Experimental design: Develop experimental protocols and methodologies for investigating human-computer interaction, artificial intelligence, cognitive modeling, or related areas. Ensure that research designs are rigorous, ethically sound, and aligned with project objectives.

Research Assistant

Shanghai Jiao Tong University, Dept. of Computer Science, 2018 - 2022, Shanghai- China

Duties:

- Supported research projects in Human Action Recognition within the Department of Computer Science.
- Assisted in data collection, analysis, and publication of research findings.
- Contributed to academic conferences and presentations.

Teaching Assistant

Jordan University of science and technology, Dept. of Computer Science, 2016 - 2017, Irbid- Jordan

Duties:

- Assisted professors in teaching undergraduate Computer Engineering students in AI course.
- Conducted tutorials, prepared educational materials, and evaluated student performance.
- Facilitated small group discussions and provided academic support.

Grants, honors and awards

Chinese Government Scholarship for Ph.D, Computer science, 2018 Best International Graduate Student; SJTU, 2021

Publication

Refereed Journal Articles

1. Tamam Alsarhan, Usman Ali, Hongtao Lu, Enhanced discriminative graph convolutional network with adaptive temporal modelling for skeleton-based action recognition, *Computer Vision and Image Understanding*, Volume 216, 2022.
2. Luay Alawneh, Tamam Alsarhan, Mohammad Al-Zinati, et al. Enhancing human activity recognition using deep learning and time series augmented data. *Journal of Ambient Intelligence and Humanized Computing*, 1-16 (2021).
3. Usman Ali, Bayram Bayramli, Tamam Alsarhan and Hongtao Lu. "A lightweight network for monocular depth estimation with decoupled body and edge supervision." *Image Vis. Comput.* 113 (2021): 104261.
4. Tamam Alsarhan , Osama Harfoushi, Ahmed Younes Shdefat, Nour Mostafa, Mohammad Alshinwan, and Ahmad Ali. 2023. "Improved Graph Convolutional Network with Enriched Graph Topology Representation for Skeleton-Based Action Recognition" *Electronics* 12, no. 4: 879. <https://doi.org/10.3390/electronics12040879>

Refereed Conference Articles

5. Naoufel Werghi Syed Sadaf Ali, Iyyakutti Iyappan Ganapathi, Tamam Alsarhan, "Enhanced authentication system with robust features for the secure user template", 2023 IEEE 12th International Conference on Communication Systems and Network Technologies (CSNT)
6. Tamam Alsarhan, Luay Alawneh, Mohammad Al-Zinati and Mohammad Al-Ayyoub, "Bidirectional Gated Recurrent Units For Human Activity Recognition Using Accelerometer Data," 2019 IEEE SENSORS, Montreal, QC, Canada, 2019, pp. 1-4.
7. Tamam Alsarhan and Hongtao Lu, "Collaborative Positional-Motion Excitation Module for Efficient Action Recognition", PRICAI 2021: Trends in Artificial Intelligence.
8. Position-Aware Graph Neural Networks for Skeleton-based Action Recognition (Under revision)
9. Comparative study on Graph Neural Networks for Skeleton-based Action Recognition (Under revision)

Courses

- AI
- Computer vision
- Image processing
- Machine learning
- Data science
- Data mining
- Algorithms
- Data structures
- Linear Algebra

Teaching Experience

Artificial Intelligence

Image processing

Computer vision

Deep learning

Pattern Recognition and information analysis

Object oriented programming

Structured programming

Computer Ethics

Skills

Languages

English

Arabic

Chinese

Scripting

1. Machine Learning Framework (Pytorch, Torch, TensorFlow, Keras)
2. Scientific programming (Python, MATLAB, C++/C)
3. Digital typesetting (Latex, Microsoft Word)

Service to the community

During my voluntary work, I have been selected to run a community project under the supervision of the International Committee of the Red Cross (ICRC) and the Jordan Red Crescent (JRC).

Reference

Available upon request

January 21, 2024