Zain Ulabedeen Farhat

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ZainUFarhat Zain Ulabedeen Farhat

EDUCATION

University of Central Florida - PhD in Electrical Engineering **Orlando, FL**
Expected Class of 2029 *May 2029*

Illinois Institute of Technology - B.S in Artificial Intelligence/Minor Statistics **Chicago, IL**
Class of 2023 *May 2023*

Santa Monica Community College **Santa Monica, CA**
2020 Transfer *June 2020*

PUBLICATIONS

- Zain U. Farhat, Debamita Ghosh, George K. Atia, and Yue Wang. *Sample-Efficient Distributionally Robust Multi-Agent Reinforcement Learning via Online Interaction*. The Fourteenth International Conference on Learning Representations (ICLR). Published 2026.
- Chi Zhang, Zain U. Farhat, George K. Atia, and Yue Wang. *Model-Free Offline Reinforcement Learning with Enhanced Robustness*. The Thirteenth International Conference on Learning Representations (ICLR). Published 2025.

SKILLS

- C/C++ and Python
- Functional Programming
- High Level Assembly-HLA
- Reinforcement Learning
- Machine Learning
- Deep Learning
- Computer Vision
- PyTorch/Keras/TensorFlow
- OpenAI Gym
- Large Language Models (LLM)
- Vision Language Models (VLM)
- Vision-Language-Action (VLA)

HIGHLIGHTED COURSEWORK

University of Central Florida

- COT5405 - Design & Analysis of Algorithms
- CAP6412 - Advanced Computer Vision
- MAA5210 - Topics in Advanced Calculus
- MAA5237 - Mathematical Analysis
- MAA6238 - Measure & Probability
- STA6236 - Theoretical Statistics I
- STA6327 - Theoretical Statistics II
- EEL6938 - Mathematical Foundations of Advanced Machine Learning
- EEE5542 - Random Processes I

Illinois Tech

- CS577 - Deep Learning
- CS584 - Machine Learning
- CS512 - Computer Vision
- MATH446 - Time Series
- MATH475 - Probability
- MATH476 - Statistics
- MATH484 - Regression
- MATH477 - Numerical Linear Algebra
- MATH569 - Statistical Learning

AWARDS

Illinois Institute of Technology

- $30,000 Transfer Tuition Scholarship/year
- $6000 STEM+ Scholarship/year

University of Central Florida
- Graduate Teaching Assistantship

TEACHING ASSISTANT AT UNIVERSITY OF CENTRAL FLORIDA

- CAP5610 - Machine Learning
- COT3100 - Discrete Structures
- ENG3420 - Engineering Analysis
- ENG3211 - Engineering Analysis & Computation

RESEARCH-INTERNSHIPS

UCF REU 2021 Internship *May, 2021 - Aug, 2021*
- Participated in the 34th NSF REU held at the Center of Research for Computer Vision at University of Central Florida.
- Project: 3D Multi-Object Tracking using Lidar Data.
- I worked on 3D multi-object tracking on Lidar data that utilized the KITTI object tracking dataset and assessed the results on the Pedestrians and Cars benchmarks.
- Multi-Object Tracking (mmMOT) frame-work, PointNet Architecture and Deep Affinity Network (DAN) to help in live multi-object detection for autonomous vehicles
- The model achieved state-of-the-art results on the pedestrians benchmark with a 96.31% MOTA (accuracy) and 99.99% MOTP (precision)
- link: https://www.crcv.ucf.edu/nsf-projects/reu/reu-2021/

UC Irvine SURF 2022 Internship *Jun, 2022 - Aug, 2022*
- Participated in the University of California Irvine (UCI) Summer Undergraduate Research Fellowship (SURF) program.
- Project: Using Long Short Term Memory (LSTM) Network to Predict Next States
- Built an LSTM-RNN for object tracking tasks
- Assessed quality of model on synthetic datasets such as the Bearings Only and Synthetic Disk Tracking datasets

Neuromatch Academy *Jul, 2023 - Jul, 2023*
- Participated in an intensive summer deep learning bootcamp with Neuromatch Academy.
- Project - TexinVent: A Dual Model Approach for Sentiment-Aware Text Generation

Discovery Partners Institute (DPI) Research Scholars Program *Jan, 2022 - May, 2022*
- Participated in the Discovery Partners Institute Research Scholars program.
- Project: Bridge Deck Rapid Assessment Using AI Structural Sensing and Augmented Reality
- Leveraged the power of Artificial Intelligence and Augmented Reality to assess the quality of bridges for future inspectors.

EXTRACURRICULAR ACTIVITIES

Secretary of Machine Learning Club at Illinois Tech *Feb, 2021 - Aug, 2022*
- Organize and hold minutes of executive board meetings.
- Work on spreading the ideas of Machine learning to the Illinois Tech Community.