

ALI ZEYNALI

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WORK AUTHORIZATION

U.S. Permanent Resident (Green Card Holder)

EDUCATION

PhD of Computer Science, University of Massachusetts Amherst - GPA: 4.0/4.0 2022 - June 2026 (Expected)

MS of Computer Science, University of Massachusetts Amherst - GPA: 4.0/4.0 2019 - 2022

Bachelor of Science in Computer Engineering, Sharif Universiyt of Technology 2014 - 2019

WORK EXPERIENCE

Data Scientist Intern - Airbnb - Remote Jun 2025- Present

- Automating the detection of AI generated images.
- Skills: Computer Vision, Vision Transformers (ViTs), Attention based Models, Difussion Models.

Machine Learning Data Scientist Intern - SiriusXM and Pandora - Oakland, CA Jun 2024- Aug 2024

- Developed a framework to explain the similarity of a query and a document retrieved by a search ranking model; Designed on collaboration of multiple LLMs.
- Enhanced the performance of previous models up to 26% with the final implementation.
- Skills: NLP, LLM, Attention based Models, Search.

Software Enineering Intern - Google LLC. - Mountain View, CA Jan 2022- May 2022

- Developed a highly accurate model to address the interest matching points problem.
- Enhanced the performance of previous models up to 50% with the final implementation.
- Skills: Deep Learning, Computer Vision, Image Processing, Tensorflow.

Data Science and Machine Learning Research Intern - Adobe Inc. - San Jose, CA May 2021- Aug 2021

- Enhanced streaming model of Adobe liquid-mode PDF, ensuring seamless performance in offline/online.
- Improved quality of experience and wasted bandwidth both up to 20% with the final model.
- Skills: Prediction Models, Online Decision Making, Data Analysis, Statistics.

Data Scientist Intern - Nullatech (start-up company) May 2017- Nov 2017

Science Olympiad Tutor and Program Manager - National Young Scholar Club Jan 2014- Aug 2018

SKILLS

Deep Learning and LLMs	LangChain, PyTorch, Tensorflow, Keras, ONNX
Machine Learning	Deep neural networks, Reinforcement learning, Statistical data analysis
Programming Languages	Python, Java, C++, C#
Data Analysis	Data visualization, Numpy, Pandas, Scikit-learn, SciPy, Gurobi, CVXPY
Development Tools	Git, SQL, mySQL, PostgreSQL, Docker
Web Development	Django, HTML, CSS
Additional Skills	AWS, SageMaker, Jupyter notebook, Object oriented programming, L <sup>A</sup> T <sub>E</sub> X

SELECTED PROJECTS

Robust and Unbiased Self-Play Strategy for Fine-Tuning Large Language Models

A framework for fine-tuning large language models (LLM) on imbalanced datasets.

VSE360: Online 360-degree video streaming simulation environment

Fully simulated Python environment to evaluate 360-degree video bitrate control algorithms. [Github]

## AI-Generated music using Deep Learning + LSTM

Generating music using deep learning techniques, and LSTM networks. [Github]

## AI-Generated short stories using bidirectional LSTM

Generating short/tiny stories with deep LSTM. [Github]

## ZeySed: Deep neural networks for leave classification

Classifying image of leaves using deep neural networks. [Github]

## HONORS AND AWARDS

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### Winner of Thesis Defense Fellowship Award

Fall 2024

University of Massachusetts, Amherst

### Winner of Thesis Proposal Fellowship Award

Fall 2023

University of Massachusetts, Amherst

### Nominated for the Microsoft Research Fellowship by the CICS Department

Summer 2021

University of Massachusetts, Amherst

### Winner of Donald F. Towsley Graduate Scholarship and Fellowship Award

Summer 2021

University of Massachusetts, Amherst

### Rank 7<sup>th</sup> among 177 B.Sc. students of computer engineering department

Summer 2019

### Rank 4<sup>th</sup> among 1823 teams in 10<sup>th</sup> IEEEEXTREME, 24<sup>h</sup> programming contest

Fall 2016

### Golden Medalist of 8<sup>th</sup> International Olympiad IOAA in Romania

Summer 2014

Among more than 200 international students

### Golden Medalist of 9<sup>th</sup> National Science Olympiad NOAA

Summer 2013

Among more than 5,000 students

## SELECTED PUBLICATIONS

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- **Under review**     *Ali Zeynali, Mahsa Sahebdel, Qingong Liu, Ramesh K. Sitaraman, Mohammad H. Hajiesmaili; Smoothed Online Optimization for Target Tracking: Robust and Learning-Augmented Algorithms;*
- **Under review**     *Ali Zeynali, Mahsa Sahebdel, Noman Bashir, Ramesh K. Sitaraman, Mohammad H. Hajiesmaili; Near-Optimal Emission-Aware Online Ride Assignment Algorithm for Peak Demand Hours;*
- **Published**     *Mahsa Sahebdel, Ali Zeynali, Noman Bashir, Prashant Shenoy, Mohammad H. Hajiesmaili; LEAD: Towards Learning-Based Equity-Aware Decarbonization in Ridesharing Platforms; ACM FAccT; 2025*
- **Published**     *Ali Zeynali, Shahin Kamali, Mohammad H. Hajiesmaili; Robust Learning-Augmented Dictionaries; ICML; 2024*
- **Published**     *Mahsa Sahebdel, Ali Zeynali, Noman Bashir, Prashant Shenoy, Mohammad H. Hajiesmaili; A Holistic Approach for Equity-aware Carbon Reduction of Ridesharing Platforms; ACM e-Energy; 2024*
- **Published**     *Ali Zeynali, Mohammad H. Hajiesmaili, Ramesh K. Sitaraman; BOLA360: Near-optimal View and Bitrate Adaptation for 360-degree Video Streaming; ACM Multimedia Systems; 2024*
- **Published**     *Mahsa Sahebdel, Ali Zeynali, Noman Bashir, Mohammad H. Hajiesmaili, Jimi Oke; Poster: Data-driven Algorithms for Reducing the Carbon Footprint of Ride-sharing Ecosystems; ACM e-Energy; 2023*

- **Published**     *Xi Chen, **Ali Zeynali**, Chico Camargo, Fabian Flock, Devin Gaffney, Przemyslaw Grabowicz, Scott Hale, David Jurgens, Mattia Samory; **SemEval-2022 Task 8: Multilingual news article similarity**; 16th International Workshop on Semantic Evaluation (SemEval); 2022*
- **Published**     *Lin Yang, **Ali Zeynali**, Mohammad H. Hajiesmaili, Ramesh K. Sitaraman, Don Towsley; **Competitive Algorithms for Online Multidimensional Knapsack Problems**; ACM Sigmetrics; 2022*
- **Published**     ***Ali Zeynali**, Bo Sun, Mohammad H. Hajiesmaili, Adam Wierman; **Data-driven Competitive Algorithms for Online Knapsack and Set Cover**; AAAI; 2021*
- **Published**     *Bo Sun, **Ali Zeynali**, Tongxin Li, Mohammad H. Hajiesmaili, Adam Wierman, Danny HK Tsang; **Competitive Algorithms for the Online Multiple Knapsack Problem with Application to Electric Vehicle Charging**; ACM Sigmetrics; 2021*