

# ALI ZEYNALI

Room 339, LGRC, UMass Amherst, MA

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## EDUCATION

**Ph.D. Student in Computer Science**, University of Massachusetts Amherst 2022- Present

Co-ADVISORS: RAMESH K. SITARAMAN, MOHAMMAD H. HAJIESMAILI

**GPA: 4.0/4.0**

**MS Student in Computer Science**, University of Massachusetts Amherst 2019- 2022

Co-ADVISORS: RAMESH K. SITARAMAN, MOHAMMAD H. HAJIESMAILI

**GPA: 4.0/4.0**

**Bachelor of Science in Computer Engineering**, Sharif University of Technology (SUT), Tehran 2014- 2019

**GPA: 18.27/20.0 (equiv. 4.0/4.0)**

## INTERESTS

Online learning, Online optimization, Multimedia systems, Responsible AI

## SKILLS

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

## WORK EXPERIENCE

**Research Software Enineering Intern** Jan 2022- May 2022

Google LLC., Mountain View, USA

Developed a highly accurate model to address the interest matching points problem by employing image processing and machine learning techniques, including depth detection, and image perspective detection/modification. Successfully enhanced the performance of SOTA models by up to 50% with the final implementation.

**Data Science and Machine Learning Research Intern** May 2021- Aug 2021

Adobe Inc., San Jose, USA

Focused on enhancing user experience by optimizing PDF file interactions in liquid-mode, ensuring seamless performance in both offline and online streaming modes.

## PUBLICATIONS

- **Under Submission**     *Ali Zeynali, Shahin Kamali, Mohammad H. Hajiesmaili; Robust Learning-Augmented Dictionaries*
- **Under Review**     *Ali Zeynali, Mohammad H. Hajiesmaili, Ramesh K. Sitaraman; **BOLA360: Near-optimal View and Bitrate Adaptation for 360-degree Video Streaming**; arXiv; 2023*
- **Accepted**     *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**     *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*

## SELECTED PROJECTS

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### VSE360: Online 360-degree video streaming simulation environment

Fully simulated python environment to evaluate 360-degree ABR 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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### Thesis Proposal Writing Fellowship Award

Fall 2023

University of Massachusetts, Amherst

### Donald F. Towsley Graduate Scholarship

Summer 2021

University of Massachusetts, Amherst

### Selected in Top-Ten (among 177) B.Sc. students of computer engineering department

Summer 2019

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

Fall 2016

## RELATED COURSES

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### Graduate Courses:

Neural Networks, Database design and implementation, Advanced algorithm, Machine learning, Artificial intelligence, Social and economic networks

### Undergraduate Courses:

Artificial intelligence, Probability and statistics, Design of algorithms, Database design, Data structure and algorithms

### Online courses:

Career Essentials in Generative AI (LinkedIn learning)