Mahsa Sahebdel

 github.com/mahsasahebdel   mahsasahebdel.com   LinkedIn   Google Scholar   msahebdelala@umass.edu

EDUCATION

MS/PhD in Computer Science   2021 - Expected May 2026
University of Massachussetts Amherst

M.Sc. in Computer Engineering, Networked Systems   2016 - 2019
University of Tehran

B.Sc. in Computer Engineering   2011 - 2015
Azarbaijan Shahid Madani University

RESEARCH INTERESTS

Online decision making, Online resource allocation, Fairness, Reinforcement learning

PUBLICATIONS

BOLA360: Near-optimal View and Bitrate Adaptation for 360-degree Video Streaming
*Ali Zeynali, **Mahsa Sahebdel**, Mohammad H. Hajiesmaili, Ramesh K. Sitaraman* - (**Under review**)

Near-Optimal Emission-Aware Online Ride Assignment Algorithm for Peak Demand Hours
*Ali Zeynali, **Mahsa Sahebdel**, Noman Bashir, Ramesh K. Sitaraman, Mohammad H. Hajiesmaili* - (**Under review**)

LEAD: Towards Learning-Based Equity-Aware Decarbonization in Ridesharing Platforms
***Mahsa Sahebdel**, Ali Zeynali, Noman Bashir, Prashant Shenoy, Mohammad H. Hajiesmaili* - **ACM FAccT 2025**
(**Accepted**)

A Safe Exploration Strategy for Model-free Task Adaptation in Safety-constrained Grid Environments
*Erfan Entezami, **Mahsa Sahebdel**, Dhawal Gupta* - **ICDS 2024** (**Accepted**)

A Holistic Approach for Equity-aware Carbon Reduction of Ridesharing Platforms
***Mahsa Sahebdel**, Ali Zeynali, Noman Bashir, Prashant Shenoy, Mohammad H. Hajiesmaili* - **ACM e-Energy 2024**

Data-driven Algorithms for Reducing the Carbon Footprint of Ride-sharing Ecosystems
***Mahsa Sahebdel**, Ali Zeynali, Noman Bashir, Mohammad H. Hajiesmaili, Jimi Oke* - **ACM e-Energy 2023**

TeleCrowd: A Crowdsourcing Approach to Create Informal to Formal Text Corpora
*Vahid Masoumi, Mostafa Salehi, Hadi Veisi, Golnoush Haddadian, Vahid Ranjbar, **Mahsa Sahebdel*** - **arXiv 2020**

EXPERIENCE

SOLAR Lab (Sustainability, Optimization, Learning, and Algorithms Research)   Jan 2022 - Present
- Working on developing online algorithms that incorporate fairness, optimized resource allocation, and emission reduction considerations.

COIN Lab (Computer and Information Network)   2016 - 2019
- Worked on Persuasive Gamification of Learning Platforms.

Emita (powered by Manarayka), Data Science Intern   Jan 2020 - Dec 2020
- Generated air pollution reports and conducted statistical and numerical air pollution modeling.
- Data analysis and traffic modeling for real-time traffic management, bottleneck identification, and the reduction of congestion.

Bahar E-Commerce Services, Backend Developer Intern   Dec 2018 - Dec 2019
- Developed an extensive customer loyalty management system, leveraging the Odoo ERP platform.

Skills

Programming Languages: Python, Java, C++, C#, R

Deep Learning: TensorFlow, PyTorch, Keras, Scikit-learn

Web Programming: HTML, CSS, JavaScript, Django

Database Management: SQL, mySQL, Oracle, PostgreSQL

Data Analysis: Data visualization, Gurobi, Numpy, Pandas

Additional Skills: Git, Docker, Jupyter notebook, Object oriented programming, LaTeX

Projects

E2-RideKit: A comprehensive toolkit enhancing ridesharing datasets with emissions and equity information. [GitHub]

LingoLand: An Android application for English language learning, incorporating the 6D gamification design framework and the Bartle player model.

KalKal: A Telegram inline game that challenges knowledge of people.

MENTORING AND OTHER SERVICES

Reviewer for KDD 2025 (Feb & Aug cycles)

Academic Services at University of Massachusetts, Amherst   Jan 2024
Mentored three undergraduate students in a 7-week research volunteer program.

Treasurer, IGSA at University of Massachusetts, Amherst   July 2023 - Present

Honors and Awards

Common Good Fellowship   Jan 2023
Associated with UMass Amherst

University of Massachusetts Amherst CICS Scholarship   Jan 2021
Associated with UMass Amherst

Top 10 ranked teams in ICT Programming Challenge 5 among 75 teams   Jul 2020
SharifICT

Full scholarship of the Networks and Systems summer school   Aug 2018
Tehran Institute for Advanced Studies (See Certificate)

Ranked 2nd among 33 teams in the second NovinTech BootCamp Event   Jun 2018
NovinTech Accelerator

Ranked 101st among 2000 students   Sept 2016
In National Graduate Entrance Examination in Computer Engineering

Selected Coursework

Graduate Courses

Neural Networks, Advanced Methods in HCI, Probabilistic Models, Machine Learning and Pattern Recognition, Advanced Algorithms, Complex Networks, Simulation and Modeling, Reinforcement Learning, Database Design and Implementation

Undergraduate Courses

Artificial Intelligence, Algorithms Design, Data Structure, Applied Probabilities and Statistics