Ali Fallah

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Education

Ph.D. - Mechanical Engineering (Working in Biomedical eng. realm)
New Jersey Institutes of Technology, Newark, NJ *2025 - ongoing*

M.S. - Industrial Engineering
University of Missouri, Columbia, MO
2023 - 2025

B.Sc. - Industrial Engineering
Sharif University of Technology, Tehran, Iran *2017 - 2022*

Research Interests

- Machine Learning
- Stochastic Programming
- Linear Programming
- Non-Linear Programming
- Statistics

Projects

- Two metaheuristics approach for joint optimization of customer location clustering and drone-based routing for last mile deliveries. (Advanced Analytics with Engineering Applications – M.Sc.)
- Minimizing Waiting Times for Electric Vehicle Charging on Highways through Optimal Station Placement: A Queueing Theory and Markovian Process Approach. (Stochastic Processes / Models – M.Sc.)
- Regression Analysis using SAS program: Linear Regression, ANOVA, Forward Selection (Regression Analysis – B.Sc.)
- Analyzing datasets via Machine Learning Algorithms. (Transportation Planning – B.Sc.)
- Analyzing datasets via ML: Logistic Regression, Random Forest, XGBoost. (Data Mining and Applications – B.Sc.)
- Study Customers' Behavior in FMCG Industry via ML approaches (B.Sc. Thesis)

Skills

Python, GAMS, Gurobipy, Pyomo, SAS, R, JMP

Work Experience

- TA-ship: Manufacturing Process; spring 2021-2022 (SUT)
- TA-ship: Deterministic Models in Operation Research; Fall 2024 (University of Missouri)
- Sales Planner: Conducted sales forecasting for brokers and customers using machine learning, improving accuracy by 4%.
  Developed predictive models to forecast future sales trends, utilizing Python for advanced analytics. May 2022 -July 2023

Awards and Honors

- Ranked 230th, in Iranian National University Entrance Exam among more than 150,000 students, 2017.
- Recognized as a Talented Student in the first three years of High School.

Courses taken in M.Sc.

Stochastic Processes / Models (ISE dept.)

Network Optimization (ISE dept.)

Design and Analysis of Algorithms I (Computer Science dept.)

Data Visualization (Computer Science dept.)

Statistical Inference (Stat dept.)

Advanced Analytics with Engineering Applications (ISE dept.)

Design and Analysis of Engineering Experiments (ISE dept.)

Adv Topics ISE: Pyomo was taught and learned (ISE dept.)

Courses taken in Ph.D.

Reinforcement Learning (Computer Science dept.)

Machine Learning (Computer Science dept.)

Deep Learning (Computer Science dept.)

HOBBIES

- Art: Piano
- Sports: Football and Body Building