Farzad Avishan
Operations research scientist
F.avishan@gmail.com, (+15142334685)

Summary

Operations research and data scientist with over 3 years of experience in optimization and predictive modeling. My strong operational research background and proven machine learning skills enable me to design algorithms to solve complex problems and develop predictive models for large-scale data analysis. I have a track record of successfully implementing solutions that enhance decision-making and operational efficiency in various industries. I hold an open work permit, which is valid until February 2028.

LinkedIn: www.linkedin.com/in/farzad-avishan/

Website: www.farzadavishan.com/

Work experience

FPT Software, Canada, 2024 October- current (Operations research scientist)

Main responsibilities

- Use optimization techniques to support the business
- Establish processes for large-scale data analyses, model development, validation, and implementation.
- Conduct exploratory data analysis to identify trends, patterns, and relationships in data.
- Collaborate with data professionals, such as data engineers and machine learning engineers, to ensure data pipeline and model integration.

HEC Montreal, Canada, 2023-2024 October (Post-doctoral research fellow)

Projects:

- Developing optimization models and solution approaches for various problems
- Inventory routing problem with heterogeneous vehicles: delivery and backhauling
- Delivery and charging scheduling planning for last-mile delivery with electric vehicles

Ozyegin University, Istanbul, Turkey, 2021-2023 (Research assistant)

Selected projects:

- Scheduling of electric vehicles: Optimizing the number of required electric vehicles to cover all trips and designing a simulation to evaluate the solution; a case study conducted at Binghamton University
- Relief supply distribution: Optimizing service times for wounded people and determining the visiting order of wounded sites in post-disaster scenarios, a case study conducted in Van province, Turkey
- Production planning: Optimizing production planning under demand uncertainty, comparing adjustable robust optimization and folding horizon approaches

Elected as the outstanding research assistant in the engineering department

Dadash Baradar Ind. Co. Tabriz, Iran, 2016-2017 (System analysis expert)

Main responsibilities:

- Developing predictive models to forecast demand on an annual, monthly, and weekly basis
- Managing production line setup project

Hadid Parlakh Co. Tabriz, Iran 2011-2015 (Quality control expert)

Main responsibilities:

- Utilizing statistical control techniques to monitor and control the quality of production processes
- Developing reports and dashboards to track quality metrics, identify trends, and highlight areas for improvement
- Identifying out-of-range processes and those needing calibration

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Consultant project

Clear D3, 2023

Project description: Utilizing historical data to develop a predictive model for forecasting transportation costs in upcoming periods

Key Achievements:

- Generated predictive models to approximate future transportation costs
- Enabled the company to use model outputs for more informed customer price negotiations
- Contributed to improved pricing strategies, enhancing the company's competitive edge in the market

Education

Ph.D. Industrial Engineering

Ozyegin University, Istanbul, Turkey, Received in March 2023

Research field: Applications of optimization under uncertainty methods on production planning, supply chain and logistics problems

Thesis Title: Applications of Robust Optimization in Logistics and Production Planning (CGPA: 3.87 out of 4)

M.Sc. Industrial Engineering

Mazandaran University of Science and Technology, Babol, Iran, Received in September 2014

Thesis Title: A New Optimization Model for Production and Distribution of Supply Chain with Green Logistic Approach

Published papers

All papers are available at: https://scholar.google.ca/citations?user=WfsfoxwAAAAJ&hl=en

Technical skills, interests, and expertise

Combinatorial optimization

Design and management of large-scale networks

Heuristic algorithms

Machine learning

Software skills

Programming Languages: Python, C++

Specialized Software: Gurobi, FICO Xpress, CPLEX, GAMS, MATLAB

Version Control: GitHub/ Git