Tina Shahedi

☎ +31 687 37 8500 | @ T.Shahedi@uu.nl | 🔗 LinkedIn | 🌐 tinashahedi.com | 📍 Utrecht, The Netherlands

PROFILE

MSc graduate in Systems Optimization with expertise in data analytics, and machine learning, particularly in AI and NLP contexts. Skilled in developing scalable optimization models for complex systems, with a strong foundation in optimization algorithms and programming languages such as Python and R.

EDUCATION

M.Sc. in Industrial Engineering—Systems Optimization

University of Tehran (Best University in Iran based on U.S. News)   *Sep 2019 – Sep 2022*

Thesis: Designed a hybrid model integrating green logistics and data-driven analytics to optimize supply chain efficiency.
GPA: 18.42/20 (4/4); **Thesis Grade:** 20/20 (4/4)

B.Sc. in Applied Mathematics

*K. N. Toosi University of Technology; **Last 3 years GPA: 16.13/20 (3.35/4)***   *Sep 2013 – Sep 2018*

WORK EXPERIENCE

Junior Researcher

Utrecht University (Faculty of Social and Behavioural Sciences)   *Oct 2023 – Present*

Member of: Natural Language and Text Processing group (*NLTP*)

Under the supervision of: Dr. Ayoub Bagheri, Dr. Anastasia Giachanou, and Dr. Gerko Vink

Tasks:
- Contributed to the Machine Learning with Python summer school course by developing practical materials.
- Developed a scalable R Shiny App that aggregated and visualized over 3,600 AI course datasets using Python and R, supporting real-time decision-making for academic planning.
- Supported research and educational aspects of multiple projects, including M&S consultation with researchers and exploring the impact of generative AI in academic settings.
- Conducted in-depth social research and developed innovative methodologies, utilizing mixed-effects logistic regression models.

Research and Teaching Assistant

University of Tehran (Faculty of Industrial Engineering)   *Sep 2022 – Jan 2023*

Under the supervision of: Prof. Dr. Masoud Rabbani and Dr. Seyed Ali Torabi

Tasks:
- Mentored over 20 M.Sc. students by providing feedback and grading their projects for an advanced supply chain management and production planning course.
- Served as a teaching assistant for a fuzzy mathematical programming course, focusing on practical applications and guiding projects for over 50 M.Sc. students.
- Implemented advanced statistical analyses using various programming languages to support research study objectives.

Research Consult

IMIDRO (Iranian Mines & Mining Industries Development & Renovation)   *Jun 2022 – Aug 2022 (3 months)*

Under the supervision of: Dr. Seyed Ali Torabi

Tasks:
- Conducted in-depth research in the field of company productivity in the mining industry.
- Investigated the company's performance and identified areas for improvement.
- Benchmarked productivity metrics for improving production productivity indexes, focusing on sustainable production optimization and data-driven decision-making.

Business Data Analytics Intern

Polwinno (Behsazan Farda Innovation Center)   *Nov 2021 – Feb 2022 (4 months)*

Tasks:
- Applied data-driven insights to improve FinTech product development, designing business models supported by comprehensive market analysis and analytics.
- Collaborated on the Fintech project, particularly in refining its business plan through data analysis.
- Designed a value proposition canvas and a business model canvas, supported by feasibility studies and market analysis.
- Developed C4 models and wireframes in Miro, optimizing UI/UX team's product development. Integrated Devops practices with IT for enhanced business analysis and project results.

Coursework

Comprehensive Data Science Specialization
Specialization in Data Science & Big Data   *Sep 2021 – Sep 2023*
- Completed a comprehensive 350-hour data science program, focusing on machine learning, SQL, business intelligence, AI, Python programming, cloud computing, Microsoft Azure and data analysis & big data.

Machine Learning with Python
Practical Assistant   *Jul 2024*
- Supervised Python practical sessions alongside Dr. Anastasia Giachanou

Skills

Technical and Programming Skills: Advanced in Python (Google Colab and Jupyter Notebooks), MATLAB, and GAMS. Experienced in Scikit-learn, PyTorch, Pandas and similar frameworks for Machine Learning. Proficient in utilizing Vensim for dynamic programming and Arena for simulation and process optimization. Mathematical modeling (Linear programming, Mixed integer programming). Optimisation methods (Decomposition methods, Relaxation approaches). Computational modeling and simulation. Familiar with Optimization strategies.

Development Tools: Proficient with RStudio, Visual Studio, and Atom editor. Skilled in creating Shiny Apps, academic dashboards using RMarkdown. Familiar with the Gemini environment and GitHub Copilot and Git. Familiar with AWS and Azure ML.

Analytical Tools: Skilled in data analysis using Python and exploratory data analysis. Proficient in analytics with Microsoft Power BI for data visualization and dashboarding. Proficient in statistical tools like IBM SPSS for data processing and analysis tasks.

Soft Skills: Excellent in critical thinking and adaptability, with a strong background in problem-solving. Known for perseverance and attention to detail. Effective in teamwork and collaboration.

Language Proficiency

Native in Farsi, Advanced proficiency in English (C1), and currently learning Dutch (A1).

Awards

Ranked 5th of graduate student: Among more than 50 graduate students of Industrial Engineering at the University of Tehran, (Sep 2022).

Ranked 41st: In the nation Iranian university entrance exam for Master of Industrial Engineering among more than 8,600 participants, (Sep 2019).

Teaching Experience

Advanced Production Planning
Research And Teacher Assistant   *Sep 2022– Jan 2023*
- Mentoring over 20 M.Sc. students, providing feedback, and grading their projects.

Fuzzy mathematical programming
Research And Teacher Assistant   *Nov 2020– Jan 2023*
- Serving as a teaching assistant for a fuzzy mathematical programming course, focusing on practical applications and guiding projects for over 50 M.Sc. students.

Publications

Mohammadi, H., Rahmati, M., **Shahedi, T.**, Novel Approaches in Financial Fraud Detection: Hybrid Machine Learning and Uncertainty-Based Deep Learning, 2024.

Rezaei, A., **Shahedi, T.**, Aghsami, A., Jolai, F., & Feili, H. (2022). Optimizing a bi-objective location-allocation inventory problem in a dual-channel supply chain network with stochastic demands.

Shahedi, T., Aghsami, A., Rabani, M, (2022).Designing a Green Closed-Loop Supply Chain Network for the automotive tire industry under uncertainty.

Selected Projects

Developing Python Practicals for the ML Course | Utrecht University | The dashboard can be accessed upon request

Developing a Shiny App for FSBS AI Courses | Utrecht University | *Shiny App*

Developing a Website for the ADAV Course | Utrecht University | *Website*

Optimizing a non-linear mixed integer mathematical programming using NSGA-II for large-sized problems | *GitHub*

Optimizing a bi-objective mixed-integer linear programming model using Grasshopper Optimization Algorithm| *GitHub*

Designing asset management and financial consultant software in the web application platform.

Designing a Resilience Model for Small and Medium-sized Enterprises (SMEs) Using a Systems Dynamic Approach

Relevant Courses

Winter school Course: Text Analysis with Python, Introduction to Python.

B.Sc. Selected Courses: Probability , Mathematical Statistics, Stochastic Processes, Operations Research, Computer & Programming(C++ & JavaScript), Advanced Python Programming, Mathematical Softwares (Wolfram Mathematica)).

M.Sc. Selected Courses: Computer simulation, modeling & optimization, Fuzzy Sets Theory and its Applications in Decision Making, Multiple-criteria decision-making (MCDM), Queuing Systems & Markov chain.

Service Activities

Peer Reviewer

Iranian Fuzzy Systems Association   *Oct 2022 – Jan 2023*

- Reviewed submissions and provided feedback for academic articles in the domain of fuzzy systems.

Conference Organizer

International Scientific Conferences on AI and Machine Learning (BNAIC2024)   *Jan 2024 – Nov 2024*

- Organized and managed conference website.

Professional Membership

Open Science Community Utrecht (OSCU)   *Oct 2023 – Present*

Scientific Association of Industrial Engineering of K.N.Toosi University of Technology   *Apr 2017 – Apr 2018*

Hobbies

I enjoy listening to history podcasts and audiobooks, watching science-fiction movies and documentaries, reading poetry, photographing in nature, and relaxing away from the hustle and bustle of the city.

References

Dr. Ayoub Bagheri, an expert in AI and NLP tools & associate professor at Utrecht University, supervised my work on social research, a.bagheri@uu.nl

Dr. Gerko Vink, an expert in GenAI and Imputation of Missing Data & associate professor at Utrecht University, supervised my work on responsible AI frameworks, g.vink@uu.nl

Dr. Anastasia Giachanou, an expert in Python programming and data analytics & assistant professor at Utrecht University, supervised my work on developing Python practicals for the machine learning summer school course 2024, a.giachanou@uu.nl

Dr. Seyed Ali Torabi, an expert in Operations and Supply Chain Management & full Professor at University of Tehran, supervised my work on a national project in Iranian mining industry for improving production productivity indexes, satorabi@ut.ac.ir

Dr. Masoud Rabbani, an expert in Operations and Business Engineering & full Professor at University of Tehran, supervised my thesis on designing a hybrid model integrating green logistics and data-driven analytics to optimize supply chain efficiency, mrabani@ut.ac.ir