Contact

bahar.salafian@gmail.com

www.linkedin.com/in/bahareh-salafian (LinkedIn)
scholar.google.com/citations (Personal)

Top Skills

Large Language Models (LLM)
Data Modeling
NLP Libraries

Languages

English (Full Professional)
Persian (Native or Bilingual)

Certifications

Professional Scrum Master I
Project Management Professional (PMP)®
SQL for Data Science
The Entrepreneur Experience (Conference Attendee)
PowerPoint Quick Tips (2018)

Honors-Awards

Awarded NSERC and WGRS support packages
Ranked top 6% among undergraduate students of ECE Department
Ranked top 0.5% among approximately 300,000 participants in the nationwide university entrance exam

Publications

Efficient Epileptic Seizure Detection Using CNN-Aided Factor Graphs
CNN-Aided Factor Graphs with Estimated Mutual Information Features for Seizure Detection

Bahareh Salafian, PMP, PSM I

Data Scientist | Data Analyst | Machine Learning Engineer | PMP® | Biomedical Engineer | Tech Lead | LLM | Gen AI
Toronto, Ontario, Canada

Summary

I am an innovative Data Scientist with over 5 years of experience in machine learning, predictive analytics, and natural language processing (NLP), coupled with hands-on expertise in developing innovative solutions to complex business problems. My experience spans a wide range of tools and technologies, including Python, Azure, Power BI, and advanced deep learning frameworks, enabling me to deliver impactful insights and solutions.

I specialize in designing and deploying machine learning models for tasks like customer sentiment analysis, time series forecasting, and document accessibility automation. I excel in creating interactive dashboards and actionable reports that inform strategic decisions and drive operational efficiency. My passion lies in leveraging data to improve processes, enhance customer satisfaction, and drive measurable business value.

In my current role at Service Ontario, I lead initiatives to implement large language models (LLMs) for feedback analysis, resource optimization, and stock management, contributing to significant cost and time savings. My past experience includes managing cross-functional teams to deploy AI-driven solutions and mentoring junior analysts to build their technical expertise.

Key Expertise & Capabilities:
• Developing and deploying NLP models, including LLMs, for sentiment analysis and recommendation systems
• Expertise in time series forecasting using Prophet, XGBoost, and other statistical models
• Advanced analytics and data visualization using Power BI, Tableau, and Python
• Streamlining workflows through predictive modeling and optimization techniques

Automatic multifaceted matlab package for analysis of ocular images (AMPAO)

Automatic segmentation of choroid layer in edi oct images using graph theory in neutrosophic space

Seizure Detection Using Deep Learning, Information Theoretic Measures and Factor Graphs (Master's thesis).

• Hands-on experience with cloud platforms (Azure, AWS, GCP) for scalable model deployment
• Leadership in mentoring teams, project management, and stakeholder collaboration
• Extensive knowledge of Python libraries (Pandas, NumPy, TensorFlow, PyTorch, etc.) for data science

I am also an enthusiastic person who is willing to explore and learn anything that excites me. I am open to any kind of Data-related opportunity, where I can utilize my Analytics-related expertise to help the world become a better place.

Please feel free to keep in touch with me at bahar.salafian@gmail.com.

Experience

Ontario Government | Gouvernement de l'Ontario
Data Scientist
November 2023 - Present (1 year 11 months)

• Implemented LLM models using Python and Azure Databricks to analyze over 10,000 customer
comments, identifying actionable insights to improve client satisfaction.
• Led the development of data solutions, ensuring proper data quality and its monitoring, and
proper integration aligned with the medallion architecture.
• Collaborated with BI Engineers, Ministry Partners, and Data Architects to ensure data integrity
and security by implementing best practices for data warehousing and compliance
• Designed and implemented a predictive stock management model using Exponential Forecasting
in collaboration with three cross-functional teams, saving up to 1 million high-demand form orders
and reducing procurement costs.
• Built time-series forecasting models using Python's Prophet and @RISK to predict in-person
transactions across 200 ServiceOntario locations, optimizing staffing and operational planning.

• Developed and maintained interactive Power BI dashboards and detailed reports to track
customer feedback and monitor KPIs across 20 online services and 10 Lines of Business,
uncovering trends in telephone and online channel satisfaction and supporting improvements in
ServiceOntario's service delivery.
• Delivered technical presentations to ServiceOntario executives, translating data findings into
strategic recommendations and incorporating feedback for continuous improvement.

Magnify Access Inc.
Lead Data Scientist
May 2023 - April 2024 (1 year)

• Led a team of 8 professionals to design and deploy an AI-driven solution for automatic
remediation of document accessibility issues, cutting manual processing time by 60% and
improving compliance with accessibility standards.
• Developed and deployed a Python-based BERT model via REST API to automate
recommendation extraction, achieving a 75% reduction in processing time.
• Oversaw the full project lifecycle, including task delegation, progress monitoring, and ensuring
alignment with business goals and project timelines.
• Provided technical and professional mentorship to junior team members and interns, fostering a
collaborative and growth-focused environment.

Toronto Metropolitan University
Data Scientist
February 2022 - February 2023 (1 year 1 month)
Toronto, Ontario, Canada

• Implemented end-to-end deep learning models using EEG data in Python to detect epileptic seizures, achieving an 18% improvement in AUC, F1 score, precision, and recall.
• Ensured high data integrity through robust data cleaning and preprocessing, enabling accurate and efficient integration with machine learning pipelines.

• Mentored undergraduate students by providing technical guidance and project support, strengthening their analytical capabilities and improving overall research outcomes.

Legion Technologies
Data Scientist
May 2022 - December 2022 (8 months)
Redwood City, California, United States

• Optimized time series forecasting models (XGBoost, Random Forest, and Neural Networks) through advanced feature engineering, improving demand prediction accuracy by 5% and supporting more effective workforce planning.
• Collaborated with cross-functional teams to define data requirements and implement integration solutions, enhancing data accessibility and streamlining operations for faster, data-driven decision-making.
• Delivered actionable workforce insights through automated reporting and interactive visualizations using Looker and Python, enabling stakeholders to make informed strategic decisions.

Western University
2 years 4 months

Research Assistant
September 2019 - December 2021 (2 years 4 months)

• Implemented feature engineering and evaluated ML algorithms using Python for seizure detection from EEG signals.
• Implemented lung biomechanical modeling for studying mechanical properties during radiation therapy.
• Established data quality standards and processes for accurate lung region registration and segmentation from CT images.

Teaching Assistant
January 2021 - April 2021 (4 months)

Teaching Assistant
January 2020 - April 2020 (4 months)

Isfahan University of Technology
3 years

Research Assistant
September 2017 - September 2018 (1 year 1 month)

Automatic segmentation of choroid layer in edi oct images using graph theory in neutrosophic space

Teaching Assistant
October 2015 - June 2018 (2 years 9 months)

Isfahan University of Medical Sciences
Summer Intern
May 2017 - September 2017 (5 months)

Automatic multifaceted matlab package for analysis of ocular images (AMPAO)

Education

Western University
Master of Science - MSc, Biomedical Engineering · (2019 - 2021)

Isfahan University of Technology
Bachelor of Science - BSc, Electrical Engineering · (2014 - 2018)