

Mohammad Hadi Rouhani

HIGHLIGHTS

- Collaborated with Google's Angular framework development team to conduct a comprehensive pull request review, addressing critical issues and enhancing the framework's functionality, resulting in the successful merge of the pull request into the Angular repository
- Accomplished software engineer with a robust background in machine learning and data science, delivering innovative solutions for industry challenges
- Spearheaded the creation and development of industry-leading solutions, crafting full-stack web applications and pioneering machine learning proof of concept projects
- Proficient in the art of data storytelling through powerful visualizations, unlocking valuable insights from complex data
- Collaborative team player, working seamlessly with diverse stakeholders, including business owners, project managers, and product owners, to deliver high-impact software and cutting-edge machine learning products
- Distinguished expertise in architecting modular and reproducible software products, harnessing over three years of mastery in TypeScript, JavaScript, HTML, C, Python, R, and an array of programming languages
- Azure Data Fundamental Certified: Harnessing the power of Microsoft Azure's data services, including Azure Data Lake Storage, Azure SQL Database, and Azure Synapse Analytics, to drive data-driven insights and optimize decision-making processes


EDUCATION

- **M.Sc. in Computer Science** Sep 2020 — June 2023
🏛️ University of Alberta Edmonton-Canada
- **M.Sc. in Electrical Engineering** Sep 2016 — Sep 2019
🏛️ University of Alberta Edmonton-Canada
- **B.Sc. (with Honors - 2nd top) in Electrical Engineering** Sep 2009 — Sep 2013
🏛️ Shiraz University Shiraz-Iran

Skills

Coding / MLOps	C/C++/C#, Python (scikit-learn, pytorch, tensorflow, pandas, spark, etc.), Git, Linux, Cloud computing platforms (Google Cloud, AWS, Azure), MS SQL, MySQL
Frameworks & Languages	Angular, React, ASP .NET Core, Node JS, JavaScript, HTML, CSS, REST API
Quantitative	Algorithms and Optimization, Advanced Math & Probability, Data structures, Machine Learning, Economic & Statistics
Communication	English (fluent), Persian (fluent-native), French (elementary), German (intermediate)

WORK EXPERIENCE

-  **PCL - Industrial District Business Technology** Feb 2023 - present
Software Developer II [Permanent Full-time]
 - Pioneered the development of the first-ever web-based kiosk for an industrial fabrication facility, utilizing Angular (frontend), ASP .NET Core Web API (backend), Windows Communication Foundation (WCF) services, and MS SQL on both on-premise and Azure platforms. Implemented CI/CD pipelines using Azure DevOps, enabling the hosting of machine learning containers and live data streaming for data science dashboards, resulting in substantial cost savings and enhanced industrial work performance
 - Proficient in building robust and secure web REST APIs with extensive experience in Node.js and ASP.NET, ensuring seamless integration across complex systems
 - Proven leadership as a project lead, guiding cross-functional teams to deliver high-quality software solutions on time and within budget

- Skilled in a range of frameworks and languages including ASP.NET, C#, JavaScript, Vb.NET, .NET Frameworks, HTML, CSS, and TypeScript

AltaML

Sep 2022 - Feb 2023

GovLab AI - Associate Machine Learning Developer [Full-time]

- Developed machine learning solutions for the Government of Alberta, achieving significant cost savings by automating permit document screening and authentication.
- Led code reviews, ensuring weekly sprint planning and mentoring data scientist residents in Git and GitHub, fostering collaborative and efficient workflows.
- Spearheaded responsible AI practices and established ethical guidelines, elevating organizational coding standards and demonstrating a commitment to ethical AI development.
- Designed and delivered a full-stack software product for document screening automation, resulting in millions of dollars in annual cost reductions through streamlined processing.

Alberta Machine Intelligence Institute (Amii)

Machine Learning Curriculum Manager [AI4Good Lab] [Full-time]

Apr 2022 - Aug 2022

- Worked as a member of the executive team develop the syllabus for the lab and communicate with lecturers
- Helped organize a 7-week intensive workshop with more than 100 participants, teaching assistants, lecturers, guest speakers, industry mentors, etc.
- Trained talented students/participants to become the future ML startup founders
- Organized an internal Hackathon that tailored students' abilities with data science principles

Machine Learning Facilitator [Contract Part-time]

Jul 2022 - Nov 2022

- Supported and supervised Amii's Education team on delivering workshop on AI ethics and governance.
- Worked seamlessly with the team to deliver high quality workshops for Amii's clients and partners

Freelance Data Scientist

Jan 2022 - present

- Provided machine learning solutions and consulting expertise to diverse industries, including oil & gas, global climate change, and healthcare.
- Presented as a speaker at prominent tech meetups, including PyYYC, PyData Calgary, and EdmontonPy, demonstrating thought leadership in the field of machine learning [**YouTube**] May 2022.

List of selected projects

- **Continuous Integration ML Deployment (ML-Ops) [Python Code]** Feb 2022
- **Pharmaceutical Drug review - [Python Code]** Jan 2022
- **Sizing of Charging Stations Co-located with Solar Panel and Battery Storage** Oct 2021
- **Rooftop solar panel sizing detection using deep learning - (APIC) 2021 Hackathon** Jun 2021
- **Simulator for queueing systems [Python Code]** Mar 2021
- **Economic assessment of electric vehicle integration into Alberta transportation system (ATCO)** Oct 2021

University of Alberta

Sep 2020 - May 2022

Python Teaching Assistant [Full-time]

Sep 2020 - Dec 2020

- Collaborated with a team of TAs to help 2nd-year students with their learning on Python.
- Provided solutions to the assignments and marked over 200 Python coding assignments.
- A continuous work integration in Git.

Computer Science Researcher & Software Developer

Jan 2021 - April 2022

- Conducted research in innovative topics (toward my MSc thesis on Robust Sizing of Charging Stations in Alberta Transportation System)
- Built a software product from scratch that analyzes the traffic flow at a certain location to provide sizing suggestions for charging station

University of Stuttgart, Stuttgart, Germany

Dec 2019 - Jul 2020

Data Scientist

- Led a team of data science MSc students on economic assessment of German electricity market to adopt electric vehicles
- Participated in MSc thesis defense as an examiner and supervised a number of MSc students