

MAHDI MOEINI

mmoeini@mun.ca | (709)-699-9147 | ON, Canada | [linkedin.com/in/mmoeini](https://www.linkedin.com/in/mmoeini) | m-moeini.github.io

WORK EXPERIENCE

AI/ML Researcher, *Memorial University of Newfoundland*

Sep 2022 – Sep 2024

- Explored the possibility of controlling a wheelchair through singing imagery by designing a Brain-Computer Interface (BCI) experiment to collect Electroencephalography (EEG) time-series datasets from 15 participants
- Achieved 85% accuracy in classifying EEG signals using various deep learning and machine learning models (CNNs, RNNs, SVM, XGBoost) and provided insights into model performance through statistical analysis
- Enhanced the data quality and labeling system by building a data preprocessing pipeline using MATLAB & Python
- Boosted the classification accuracy by 8% using efficient feature extraction & optimization methods (CSP, mRMR)
- Improved the data analysis speed by 50% by building an automated pipeline on Compute Canada Cloud ([Code](#))

SKILLS: Python, R, NumPy, Pandas, Scikit-learn, PyTorch, TensorFlow, Matplotlib, Seaborn, EDA, AWS

Software Developer, *Toranj Innovation Technologies*

May 2021 – Jun 2022

A health tech company concentrated on creating software solutions for the healthcare industry.

- Expanded the system scalability by developing fault-tolerant MVC microservices using Java and Spring Boot
- Eliminated the need for direct queries utilizing Object-Relational Mapping interfaces (ORM) systems
- Doubled the speed of User Acceptance Testing process by implementing RESTful APIs integrated with [FitNesse](#)
- Contributed to software development in a CI/CD environment by utilizing Git for version control

SKILLS: Java, Spring Boot, JPA, SQL, PostgreSQL, ETL, Git, Microservice Architecture

Software Developer, *Hoom Co.*

Apr 2020 – Mar 2021

A smart home technology company focused on developing IoT solutions for home automation.

- Improved the smart home functionality and user experience by collaborating with cross-functional teams to develop an IoT Hub similar to Amazon Alexa, using C and C++
- Boosted the communication speed between the Hub and smart devices by 25% by replacing HTTP with MQTT
- Delivered incremental software releases as part of a Scrum team, aligning with Agile best practices

SKILLS: C, C++, Bash, Linux, Git

PROJECTS

- **Web Scraping Project:** Reduced manual data entry time by 75% by developing a Python-based web scraping script with Selenium to automate TAs' tasks, such as grade entry, on the Memorial University web platform
- **Fundamental Image Filters:** Guided beginners in understanding fundamental image filters by providing detailed documentation on how they work and how to build them from scratch using Python & OpenCV

EDUCATION

- **Master's Degree - Computer Engineering**, *Memorial University of Newfoundland* Sep 2022 – Sep 2024
- **Bachelor's Degree - Electrical Engineering**, *Iran University of Science and Technology* Sep 2017 – May 2022

CERTIFICATIONS & SKILLS

- **Certifications:** AWS Certified Cloud Practitioner, Coursera Machine Learning Specialization
- **Programming Languages:** Python, Java, C, C++, MATLAB, SQL, R
- **Industry Skills:** Data Science, Data Visualization, Statistics, Machine Learning, Deep Learning, Big Data (Hadoop, Spark), Object-Oriented Programming (OOP), AWS (EC2, S3, Lambda)