Aymen Rumi

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Portfolio: https://aymenrumi.github.io   GitHub: https://github.com/aymenrumi

Objective & Summary

Computer Science and Mathematics graduate from McGill University looking for employment or research opportunity in data science, quantitative analyst, or software engineering

Legal Status

Dual Citizen (United States/Canada)

Education

McGill University, Faculty of Computer Science   **Montreal, Canada** | 2015-2020
Bachelor of Science, Major in <u>Computer Science</u>, Minor in <u>Mathematics</u>

Westview High School   **San Diego, California, United States**| 2011-2015
High School Diploma, <u>Award</u>: President's Education Award –Academic Excellence

Employment History

CAE Inc. – Software Engineering Internship   **Montreal, Canada** | Summer 2018, May-August
Implemented Software Automated Testing features to CAE's Simfinity framework using C++ & C# in an AGILE software development team under large-scale version control using GIT workflows. Features helped validate, debug, & resolve snags of software components.

Private Tutor – Macroeconomics CEGEP Tutor   **Montreal, Canada** | January-June, 2020
Helped student master Macroeconomics concepts by provided self-made notes additional to coursework, mostly tying rigorous theory to explainable real-world economic events. Proof-read course assignments & take-home final. Student received an A

Highlighted Projects - *please visit Portfolio for more*

Morris Water Maze Task
Using Python, replicated results from a computational neuroscience academic paper studying neural mechanisms of spatial learning and memory. Simulated a rat's spatial navigation system and memory-based coordinate system via actor-critic network using temporal difference learning; a model-free reinforcement learning method.

Stock Sentiment Classifier
Cleaned stock market news text data using lemmatization; Visualized based on frequency of distinct words by sentiment. Trained machine learning models with k-fold cross validation on preprocessed data (count & tf-id vectorization) using naïve bayes, support vector machine, random forests, & neural network. Visualized Confusion Matrix & ROC curve for each model.

House Prices: Advanced Regression Techniques
Data science project; Data cleaning (imputations for missing values), data preprocessing & data visualization done using R. Prediction models i.e. multiple linear regression, decision trees, & deep neural network trained using Python (Scikit-Learn & TensorFlow). Model performances were compared using k-fold cross validation error to choose optimal model.

Relevant Skill & Coursework

Skills
Programming
          Proficient: Python, R, MATLAB, Java, C++, C, SQL, Linux Commands | Familiar <u>With</u>: HTML, CSS, JavaScript, C#

Libraries/Tools: Scikit-Learn, Keras, TensorFlow, PyTorch, Tableau, Plotly, Ggplot2, Git, Docker, LaTeX, RMarkdown

Languages: English, French, Bengali

Relevant Courses
Computer Science: Algorithms & Data Structures, Software Design, Operating Systems, Database Systems, Artificial Intelligence, Computational Biology Methods, Robotics & Intelligent Systems, Applied Machine Learning, Brain-Inspired Artificial Intelligence

Math/Statistics: Probability, Statistics, Ordinary Differential Equations, Stochastic Processes, Numerical Computing, Statistical Computing, Honors Regression and Analysis of Variance, Time Series Analysis

Leadership & Extracurricular

Bangladeshi Student Association - Co-President (2019-18) & Representative (2018-17)   **McGill University** | 2017-2019

Led a student organization to promote Bangladeshi Culture at McGill University. Managed all members of executive team, was in charge of appointing roles; handling coordination of events, fundraisers, and collaborations with other South Asian organizations; facilitated a means for open, social, and cultural network among student body.

Intramural Basketball – Team Captain (Fall 2019)   **McGill University** | 2018-2020

Played 4 seasons (semesters) of Intramural Basketball at McGill University. Helped contribute to team championship in Winter 2019 & had the role of Team Captain in Fall 2019. Learned to sacrifice and manage egos for greater good of a team as well understanding importance of defining team hierarchy & playing designated role within larger group context.