

# Aymen Rumi

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## Objective & Summary

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

## Legal Status

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Dual Citizen (United States/Canada)

## Education

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**McGill University**, *Faculty of Computer Science*

**Montreal, Canada** | 2015-2020

Bachelor of Science: Major - [Computer Science](#), Minor - [Mathematics](#)

**Westview High School**

**San Diego, California, United States** | 2011-2015

High School Diploma: [Award](#) - President's Education Award, Academic Excellence

## Employment History

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**CAE Inc. – Software Engineering Internship**

**Montreal, Canada** | Summer 2018, May-August

- Implemented Automated testing features to CAE's Simfinity framework using **C++** & **C#** in an **AGILE** development team using **Git** workflow
- Refactored tools allowing for better diagnosis, validation, and debugging of existing & future software components.

**Private Tutor – Macroeconomics College Tutor**

**Montreal, Canada** | January-June 2020

- Helped student master **Macroeconomic** concepts by providing self-made notes tying rigorous theory to real-world economic events.
- Proof-read course assignments & take-home final allowing student to grasp content, eventually receiving an A

**Highlighted Projects** - for more please visit Portfolio at: <https://aymenrumi.github.io/>

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**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 histogram & word cloud based on distinct words by sentiment.
- Machine learning** models trained on preprocessed text data - count & tf-id vectorization, using naïve bayes, support vector classifier, random forest classifier, & deep neural network.
- Visualized Confusion Matrix & ROC curve for each model.

**House Prices: Advanced Regression Techniques**

- Data analysis**: data cleaning with imputations, data preprocessing & data visualization done using **R**.
- Machine learning models i.e. multiple linear regression, decision trees, & deep neural network trained using k-fold cross validation with Python- **Scikit-Learn** & **TensorFlow** on Amazon Sagemaker.

## Relevant Skill & Coursework

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### Skills

#### Programming

Proficient: • Python • R • MATLAB • Java • C++ • C • SQL • Linux Commands | Familiar: • HTML • CSS • JavaScript • C#

Libraries/Tools: • Scikit-Learn • Keras • TensorFlow • PyTorch • Tableau • Plotly • Ggplot2 • Apache Spark • 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 • Introduction to Stochastic Processes • Numerical Computing  
• Introduction to Statistical Computing • Honors Regression and Analysis of Variance • Introduction to Time Series Analysis

## Leadership & Extracurricular

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### 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, appointed roles; handled 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.