Roshan. **Munjal**

COMPUTER SCIENCE · UNIVERSITY OF WATERLOO

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Skills

Languages *Proficient:* Java, Python | *Competent:* JavaScript, C#, HTML5//CSS3, Racket | *Familiar:* C, MATLAB//Octave

Tools *Libs:* NodeJS, libGDX, Keras, Scikit-Learn | *Tools:* Git, GitHub, LaTeX, Atom, Ubuntu | *Frameworks:* Bootstrap, LUIS, Unity

Projects

Financial Outlier Detection

New Haven, CT

YHack (Yale Hackathon) *Dec. 2017*

- Parsed financial data from the CSV files in the JP Morgan Chase dataset and stored input into DataFrames using Pandas in Python.
- Looked for key metrics and implemented linear regression and Gaussian distributions in Scikit-Learn to identify outliers.
- Built a front-end using HTML5//CSS3 and used Flask to retrieve CSV files from the user. Presented project to 5 judges.

Chess Game & Engine

Personal *Aug. 2017 - Present*

- Uses object-oriented principles in Java including classes for the board and GUI and abstraction for pieces, moves and other features.
- Currently implementing a chess engine that analyzes previous games using the Minimax algorithm.

Destin

Toronto, ON

Global AI Hackathon *Jul. 2017*

- Developed a chat-bot that responds to queries about different locations around the world in a team of 6. Utilized Microsoft's LUIS (language processing) API and integrated components in JavaScript using NodeJS.
- Presented chat-bot project idea using the Microsoft Bot Framework Emulator to ∼40 people and earned 2nd place at the Global AI Hackathon in Toronto.

Activities

Waterloo StarterHacks

Waterloo, ON

Software Developer *Jan. 2018 - Present*

- Organizing a hackathon for 250+ people in March 2018 to help first-time hackers gain experience coding, designing and pitching ideas.

Waterloo Sailbot

Waterloo, ON

Controls Team Member *Oct. 2017 - Present*

- Tested deep learning frameworks to use with compatibility in ROS and the on-board Jetson hardware for the autonomous sailboat. Presented on benefits and drawbacks of the frameworks to a team of 10.
- Currently building a classifier to detect an orange buoy using transfer learning on the Inception model in Python.

FIRST Robotics

Mississauga, ON

Strategy Lead *Oct. 2016 - May. 2017*

- As a strategy lead, led a team of 5 to effectively collect/parse data on other teams using scouting sheets and the FRC Krawler app. Made strategic decisions based on analysis in Excel.
- Learned fundamentals of programming the robot in the FRC WPI library in Java and how sensors relay data to and from the RoboRIO.
- Attained 7 awards in Regional and Provincial events and qualified for the *FIRST* World Championship in Rookie year.

Chess Team & Club

Mississauga, ON

President *Sep. 2013 - May. 2017*

- Led high school chess club and team. Helped improve players' skills through weekly games and chess exercises.
- Participated in several tournaments in the PEEL region and won 1st place in the PEEL Team Chess Tournament 2013.

Honours

2017	**Len Richardson Award**, Awarded to 1 student in Stephen Lewis S.S. displaying great passion for science & innovation.	*Mississauga, ON*
2017	***FIRST* Rookie Inspiration Award**, Celebrates a rookie team's outstanding success in advancing appreciation for engineering, both in their school and in their communities.	*Toronto, ON*
2017	**Faculty of Mathematics Scholarship**, Awarded to outstanding students entering the Math Faculty.	*Waterloo, ON*
2015 - 2017	**Mathematics Contests**, Achieved top 5% in the Fermat/Hypatia/Cayley Waterloo Math Contests.	*Waterloo, ON*

Education

University of Waterloo

Waterloo, ON

Candidate | Bachelor of Computer Science (Co-op) *Sep. 2017 - Present*

- Taking additional courses and planning to pursue the Joint Statistics Major. (Current GPA: 3.94)
- *Online coursework:* Machine Learning (Stanford//Coursera) and Introduction to Computer Science using Python (MITx//edX).