Roshan **Munjal**

Computer Science · University of Waterloo

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Skills

Languages Java, Python, JavaScript, Bash, C/C++, Racket, SQL, MATLAB

Tools NodeJS, React, REST, force.com, AWS, Azure, matplotlib, scikit-learn, Git, CircleCI, Jira

Experience

Kooltra *Toronto, ON*

Associate Software Engineer *May. 2018 - Sep. 2018*

- Developed features for a foreign exchange back-office platform built using force.com and AWS with 1,000+ daily trades in a dynamic startup.
- Designed REST API endpoints in Java and Apex to receive foreign exchange quotes and execute trades through Oanda.
- Wrote Python and Bash scripts to automatically deploy data to Salesforce environments and run CircleCI tests, working in a team of 5 developers. Increased mean sprint points by 15% per team each week.
- Architected automatic trade confirmation emails in Apex and implemented mock unit tests using fflib-apex-mocks.

Projects

Kaggle *Waterloo, ON*

Data Science Projects *Jul. 2018 - Present*

- Implemented logistic regression in scikit-learn to predict the survival of passengers on the Titanic with 80% accuracy.
- Plotted correlations between variables using seaborn and matplotlib to find relevant features.
- Built a neural network in scikit-learn to detect and classify toxic comment vectors from a Wikipedia dataset.

Financial Outlier Detection *New Haven, CT*

Yale Hackathon Project *Dec. 2017*

- Parsed financial data from the CSV files in the JPMorgan Chase dataset and stored input in DataFrames using Pandas.
- Implemented linear regression and Gaussian distributions in SciPy using key features in the data to identify outliers.
- Built a front-end using HTML5/CSS3. Retrieved CSV files from user using Flask and displayed results using matplotlib.

Chess Game & Engine *Mississauga, ON*

Personal Project *Aug. 2017 - Dec. 2017*

- Designed the board, pieces, moves in Java with a Swing GUI and a task bar that facilitates both player and AI games.
- Constructed a chess engine using Minimax and currently using Alpha-Beta pruning to increase move search depth.

Destin *Toronto, ON*

Global AI Hackathon Project *Jul. 2017*

- Developed a chat-bot that responds to queries about different locations by analyzing Google searches, in a team of 6.
- Leveraged Microsoft Azure's LUIS API to understand search responses and integrated components using NodeJS.
- Earned 2nd place at the hackathon and presented the chat-bot project to ∼40 people.

Activities

Waterloo Sailbot *Waterloo, ON*

Controls Team Member *Oct. 2017 - Mar. 2018*

- Tested machine learning frameworks compatible with ROS and the Jetson hardware for the autonomous sailboat.
- Presented benefits and drawbacks of the frameworks to a team of 10.
- Built and tested a classifier to detect orange buoys using the Inception model in Tensorflow.

Honours

2018 **Bloomberg Code B AI Challenge**, Finished 3rd in the competition and earned the UI design prize. *Waterloo, ON*

2017 **Len Richardson Award**, Awarded to the graduating student with the most passion for innovation. *Mississauga, ON*

2015 - 2017 **Mathematics Contests**, Achieved top 5% in the Fermat, Hypatia & Cayley Waterloo Math Contests. *Waterloo, ON*

Education

University of Waterloo *Waterloo, ON*

Bachelor of Computer Science (Co-op) | Class of 2022 *Sep. 2017 - Present*

- Planning to double major in Computer Science and Combinatorics and Optimization. (GPA: 3.7)
- *Coursework:* Machine Learning (Coursera) in MATLAB, Computational Thinking and Data Science (edX) in Python, and Advanced C++ Programming (Udemy).