Roshan Munjal

Computer Science · University of Waterloo

r2munjal roshan2M.github.io roshan2M roshan2M

Programming Skills

Languages Python, JavaScript (ES6), Java, C#, C++, SQL, Scheme, MATLAB

Tools Node, React/Redux, Flask, PostgreSQL, AWS, Azure, Bash, Docker, Pandas, scikit-learn

Experience

Vision Critical — *Vancouver, BC*

Software Developer — *Jan. 2019 - Apr. 2019*

- Authored a TypeScript micro-service to export member data with team lead. Dockerized, published to ECR and invoked through an AWS State Machine. Discussed requirements with Engineering & Product Managers.
- Employed Node to stream data from either SQL or an optimized PostgreSQL store to S3 buckets, and capped memory usage at 50 MB while loading up to 10 million records. Managed back-pressure from SQL due to node-mssql limitations.
- Transformed data into JSON and CSV formats for analytics and export use cases. Published updates to a NATS streaming client used by a job scheduler.
- Assisted MemberValues ETL from SQL to PostgreSQL using a batching approach with runs every 5 minutes.
- Developed APIs in C# to re-evaluate member group filters and persist counts. Prepared feature demo for all teams.

Kooltra — *Toronto, ON*

Software Engineer — *May. 2018 - Aug. 2018*

- Developed features for a foreign exchange back-office platform built using force.com and AWS with 1,000+ daily trades.
- Designed REST API endpoints in Java and Apex to receive foreign exchange quotes and execute trades through Oanda.
- Wrote Python and Bash scripts to deploy data to Salesforce environments and automatically run CircleCI tests.
- Architected trade confirmation emails in Apex and implemented a suite of mock unit tests using fflib-apex-mocks.

Projects

Kaggle — *Waterloo, ON*

Data Science Projects — *Jul. 2018 - Present*

- Predicted survival of Titanic passengers with 85% CV accuracy in xgboost and tuned parameters with GridSearchCV.
- Built a neural network in scikit-learn to classify the toxicity levels of vectorized comments from a Wikipedia dataset.

Chess Game & Engine — *Mississauga, ON*

Personal Project — *Aug. 2017 - Dec. 2017*

- Designed the board, pieces, moves in Java using Guava structures and a Swing GUI that facilitates player and AI games.
- Constructed a chess engine using Minimax. Currently using Alpha-Beta pruning to improve move search efficiency.

Destin — *Toronto, ON*

Global AI Hackathon, 2nd Place — *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.

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) — *Sep. 2017 - Present*

Coursework: Deep Learning Specialization (Coursera), Object-Oriented Programming, Data Structures and Algorithms.
Activities: DEEP Academy **leader** at University of Toronto. **Chess** enthusiast. Schlegel Villages **volunteer**. Active **hiker**.