Rafit Jamil

Software Engineer, University of Waterloo

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Skills

Languages | Python, C++, Go, Java, JavaScript, TypeScript, PHP, C, SQL, HTML/CSS

Technologies | Node.js, React, Spring, Django, Flask, AWS, MongoDB, Redis, GraphQL, Docker, TensorFlow, Git

Education

University of Waterloo | Bachelor of Software Engineering (B.SE) September 2018 – Present

Minor: Artificial Intelligence

Work Experience

Software Engineering Intern | Meter August 2020 – Present

San Francisco, California

- Building next-gen volumetric imaging technology by developing 3D-image reconstruction algorithms, state-of-the-art computational geometry processing systems and high-performance data-analytics pipelines.

Software Engineering Intern | Setter January 2020 – May 2020

Toronto, ON

- Developed multi-threaded communication Node API with GraphQL, TypeORM, Apollo and Redis to centralize customer support, **improving user satisfaction by 47% and retention by 14%**.
- Led full-stack integration of Knex.js, Cloud SQL and Elasticsearch for robust search queries across applications.
- Automated job scheduling in coordination tools to **cut the average sales cycle from 156 hours to 48 hours.**
- Built, tested and integrated components for team's React-UI Library, accelerating frontend development speed.
- Optimized TS Node server, **improving test-coverage to 94%** and introducing endpoint type-safety with Runtypes.

Software Engineering Intern | MLSE - Toronto FC + Toronto Raptors May 2019 – September 2019

Toronto, ON

- Implemented the **first advanced tactical play predictor in the MLS and NBA**, creating a CNN-LSTM model trained on game Big Data with an 89% classification accuracy using Python, Apache ML, PySpark and TensorFlow.
- Created scouting API in Django, D3, Keras and MySQL, to predict player statistics and rookie draft probabilities.
- Introduced Azure Cloud Functions and server-side events to Flask API, **reducing data-streaming latency by 73%**.
- Built robust data-processing pipelines with Python, SQL and Azure to streamline analysis of 3 TB of game data.

Projects

Traffix | A.I. Driven Autonomous Car Network [Delta Hacks 2020 API Winner]

Node, JavaScript, C#, Unity, React (Native), MongoDB

- Trained a genetic AI algorithm in Node for vehicles to avoid collisions, generate routes and maximize traffic flow.
- Simulated vehicle network in Unity and C# using optimal genetic traits and concurrent channel communication.

Density | Population Density Wi-Fi Triangulation [Ryerson Hacks 2019 3rd Place]

C++, Arduino, Node, React, JavaScript

- Programmed Wi-Fi micro-chip mesh-network in C++ to passively triangulate Wi-Fi devices within 0.5m certainty.
- Demoed API made with Node and React, projecting live heatmaps and analytics of population within the network.

Frame AR | CAD AR Version Control System [ENG Hacks 2019 1st Place]

Swift, Node, React, TypeScript, MongoDB, Slack API

- Developed complete browser VCS for CAD projects with auto-file conversion using Node, MongoDB and React.
- Built iOS app with Swift and AR Kit to fetch project, render branches/commits and compute 3D mesh differences.