Rafit Jamil

Software Engineer, University of Waterloo

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Skills

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

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

Education

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

GPA: 3.7/4.0

Work Experience

Software Engineering Intern | Setter Jan 2020 – May 2020

Toronto, ON

- Working in an agile environment with Node, TypeScript, SQL, React/Redux, GraphQL and infrastructure technologies for Core Operations team.

Software Engineering Intern | Maple Leaf Sports - Toronto FC + Toronto Raptors May 2019 – Aug 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.

Software Engineer | The Bliss Company May 2019 – Present

Toronto, ON

- Cofounded start-up and developed PWA (Android/iOS), drawing **$20 000 in seed funding** and **300+ beta users**.
- Engineered backend REST API in Node and Express, implementing secure JWTs, Firebase Auth and MongoDB ORM.
- Designed frontend rewards system, checkout flow, shops map and product search in TypeScript, React and RxJS.

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 to project 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.

Gaze | Real-Time Gaze Tracking and Analytics

Python, OpenCV, Flask, Keras, MongoDB, jQuery

- Devised multi-user, pupil detection algorithm with Python and OpenCV for 150 degrees, 60fps gaze tracking.
- Modelled Flask app with MongoDB and Keras to visualize real-time user-gaze on commercials and adverts.