

Rafit Jamil

Software Engineering, University of Waterloo

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Skills

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

Technologies | Node, Django, Flask, React, TypeScript, PySpark, MongoDB, Redis, AWS, Azure, TensorFlow, Git

Work Experience

Data Science Intern | Maple Leaf Sports - Toronto FC & Toronto Raptors

May 2019 - August 2019

- Researched and implemented the **first advanced tactical play predictor in the MLS and NBA**, by creating a CNN-LSTM model trained on Big Data with an 89% classification accuracy using **Apache ML, PySpark** and **TensorFlow**.
- Developed new visual scouting API using **Django, D3, Keras** and **MySQL**, predicting and plotting player statistics and rookie draft probabilities with 0.0295 mean squared error for international and NCAA players.
- Shipped Flask app with **73% reduced data-streaming latency** using **Azure Functions** and server-side events.
- **Learned to warehouse 3 TB of Big Data**, building robust data processing pipelines with **Python, SQL** and **Azure**.
- Tuned autoencoder with Bayesian Optimization, decreasing logarithmic loss by 27% and training time by 50%.

Full Stack Developer | The Bliss Company

May 2019 - Present

- Cofounded start-up and developed PWA (Android/iOS), directly **attracting \$1.2 million in capital investment**.
- Worked on backend REST API including user auth and data storage using **Node, MongoDB, Redis** and **Firebase**.
- Designed frontend rewards system, checkout flow, shops map and product search in **TypeScript, React** and **RxJS**.
- Tested on **800+ beta users** and prototyped server-side data collection and analytics using a **Flask** micro-server.

Web Developer | Festive Currents

July 2018 - September 2018

- Integrated secure ticket purchasing and mail-subscriptions on website using **PayPal API, Mail Chimp, MongoDB** and **Node**, successfully **collecting \$42,000+ and 560 subscribers**.
- Led 8 developers in redeveloping webpage with **HTML/CSS, JavaScript** and **jQuery**; gaining **18,000+ yearly visits**.
- Made interactive, multi-player games using **Socket.IO, Node, OpenCV** and **Flask** for **300+ festival attendees**.

Projects

Compass | Facebook AR App (Hack the North 2019 Winner)

Node, Flask, Python, Swift, Firebase, GraphQL

- Pitched **Swift** iOS app that displays Facebook posts, events and interactions in AR to Facebook developers/execs.
- Built two micro-servers with **Flask, Node** and **Firebase** to make user-suggestions based on KNN-clusters of friends.

Density | Population Density Wi-Fi Triangulation (Ryerson Hacks 2019 Winner)

C++, Arduino, Node, React, Redux, 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** at local **BMO** branch, projecting live customer and employee heatmaps.

Frame AR | CAD AR Version Control System (Waterloo ENG Hacks 2019 Winner)

Swift, Node, React, Redux, 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 **ARKit** 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 degree, 60fps** gaze tracking.
- Modeled **Flask** app with **MongoDB** and **Keras** to visualize real-time user-gaze on commercials and adverts.

Education

University of Waterloo | Bachelor of Software Engineering (B.SE)

September 2018 - April 2023

Colonel Hugh Heasley Engineering Scholarship | \$10,000