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, Django, Flask, Spring, 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 July 2020 – Present

San Francisco, CA

- Built CAD comparison and porosity analysis tools for volumetric image analysis on React web-app using VTK.
- Designed synthetic, cloud data-pipeline to **generate 4.5 TB of CT scan data** with Python, EC2, RDS and S3.
- Automated additional 16% of image-reconstruction API via auto bounding box cropping and voxel alignment using Flask, Celery and RabbitMQ.
- Developed collaboration and project tracking features on client platform with Firebase and TypeScript.
- Improved reconstruction accuracy with artifact corrections and geometry optimizations in Python and OpenCV.

Software Engineering Intern | Setter January 2020 – May 2020

Toronto, ON

- Developed and shipped customer service app with Node, React, GraphQL, TypeORM, Apollo and Redis, resulting in **47% improvement in user satisfaction.**
- 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 classifier in the MLS and NBA by creating a CNN-LSTM ML model with 89% classification accuracy using 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

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 commit files in AR and compute 3D mesh differences.