JUSTIN BORROMEO

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Technologies Used

Programming Languages: Java, C/C++, Go, Python, TypeScript, JavaScript, C#, MATLAB, SQL
Libraries & Tools: PyTorch, TensorFlow, Keras, BigQuery, pandas, git

Work Experience

Google, *Software Engineering Intern [SQL Pipelines]* May 2020 - Present

- Currently developing a web app for monitoring and debugging of SQL Pipelines (**Java, TypeScript, Angular**)
- Added pipeline metadata gRPC API endpoints to the SQL pipelines orchestration server (**C++**)

Google, *Software Engineering Intern [Anti-Malvertising]* Sept – Dec 2019

- Developed and deployed a data pipeline and gRPC service to fingerprint webpage technologies and proactively detect security vulnerabilities in ads' landing pages (**C++, Java)**
- Added functionality to a data pipeline to evaluate click impact of blacklisting advertiser IPs (**C++**)

Imply, *Database and Distributed Systems Engineering Intern* Jan – Apr 2019

- Contributed ~20 features and patches to the open-source Apache Druid database, including time-based ordering for streaming SELECT queries, Kinesis de-aggregation, and ingestion monitoring (**Java, MySQL**)
- Added functionality to the Imply cluster management system that publishes user activity and cluster heartbeat data to streams for analytics and debugging (**Java, Kafka**)

Toast, *Software Engineering Intern [Payments Core]* May – Aug 2018

- Worked on infrastructure and services for credit card payment processing (**Java, Dropwizard, PostgreSQL**)
- Developed tooling for identifying data synchronization issues (**Java, S3)**

Lytx, *Software Engineering Intern* Jan – Apr, Aug – Dec 2017

- Implemented JWT auth for Lytx Video Services' web application and RESTful API (**ASP.NET MVC**)
- Designed a geohash indexing system and developed a proof-of-concept web application that supports sub-second geospatial queries on terabytes of GPS data (**Cassandra**, **Node.js**, **Express JQuery)**

Research

UWaterloo, *Undergraduate Research Assistant [Prof. S.M. Zahedi]* Jan - Apr 2020

- Investigated using reinforcement learning and autoencoder neural networks to tune resource allocation for collocated datacenter workloads using low-level hardware metrics (**Python, PyTorch, perf**)

Education

UWaterloo, *B.A.Sc in Mechatronics Engineering w/ Option in Artificial Intelligence* Class of 2021

- cGPA: 3.88/4.0
- Recipient of the Arthur F. Church Engineering Entrance Scholarship, UW President's Scholarship, Professional Engineers Ontario Scholarship, and the Wells Fargo Scholarship