

Rahman Qureshi (Ray)

Email: rahman.a.qureshi@gmail.com Phone: 415 960 8554

Website: rahmanqureshi.github.io

WORK EXPERIENCE

Stripe

September 2021 - Present

Software Engineer, Data Movement, Data Platform

San Francisco, USA

- Tech Lead of the Data Movement team responsible for overseeing 8 systems processing billions of events per hour supporting 7000+ datasets powering critical BI and product use cases. This role involved supporting 5 ICs, setting technical strategy and advising management on prioritization.
- Built "Falcon", **the next-generation near real-time streaming ingestion system** built on top of Kafka, Flink, Spark Structured Streaming, and Iceberg, positioning Stripe as an **industry leader** in real time data ingestion. This project improved freshness from 24h to <1hr for an initial cohort of 221 datasets with a **p90 freshness of 10 minutes** that will be used by Risk and Fraud teams to reduce losses by \$100M/yr+. My role included bringing senior leadership including project management and decision-making, managing risk, and making deep technical contributions across the entire architecture.
- Saved Stripe **1.1M/year and improved reliability of Stripe's data products** by reducing ingestion latency of daily datasets into the data warehouse by **3 hours**, by driving a migration to a new incremental ingestion pipeline built on Spark and Airflow. Stripe was able to consistently and reliably meet SLAs for daily financial and merchant reporting which resulted in improved customer experience and directly led to retention of important enterprise merchants
- Made data from Stripe's next-gen services available in our data warehouse for batch processing by building a CDC-driven export pipeline. This new pipeline leveraged incremental compute patterns and was the flagship user of the new CDC transport system
- Built a real time ingestion pipeline for CDC data into Iceberg using Flink, reducing the ingestion latency of incremental data from 1 hour to minutes.
- Reduced time-to-detection of data corruption from 7 days to 1 day using checksums

Uber Technologies Inc - Uber Freight

August 2019 - September 2021

Software Engineer, Marketplace Dynamics

San Francisco, USA

- Received "**outstanding**" performance review for DRI-ing multiple projects in the network optimization space
- Generated **\$2M/yr+** in revenue by introducing "bundles" which allowed carriers to book multiple loads at once. My role included building the core graph algorithm and working across product and data science
- Improved Uber Freight operations efficiency by automating appointment scheduling for load pickup and dropoff at shipper facilities using ML models developed by data scientists.
- Reduced search latency by **50%** by optimizing SQL queries, improving user experience and unblocking multiple product teams from launching their features
- Drove down on call alerts **from 10+ per week to 0-2 per week** by setting up service dependencies, improving system robustness, proactively completing excellence tickets. Significantly improved team mental health, happiness and cohesiveness

Google Inc

May 2018 - August 2018

Software Engineering Intern, Stadia

Waterloo, Canada

- Supported graphic shaders compiler team by using Golang to develop AB testing infrastructure which launches tests across N machines using swarming infrastructure, and collects and uploads benchmarks

- Created easy-to-launch gatekeeping test suite which significantly reduced time required to test changelists across many device variations, thereby **accelerating development**

Rapyuta Robotics

May 2017 - May 2018

Robotics Engineer

Tokyo, Japan

- Developed embedded software for the ARM Cortex M4 microprocessor—specifically the STM32F405 MCU
- Built hardware and software testing infrastructure and tests to analyze failure responses of Rapyuta's drone in multiple different scenarios
- Developed ROS package to automatically diagnose faulty hardware/configuration

Google Inc

January 2017 - April 2017

Software Engineering Intern

San Francisco, USA

- Integrated the AppEngine front-end into a sandbox environment
- Used AngularJS2, Flask, and BigTable to write a web-tool which identified Borg Job flag changes (side project)

Intel

May 2016 - December 2016

Device Modelling and Verification Engineer

San Jose, USA

- Worked on modelling and verification of the transceiver (XCVR) of Intel's new 14nm FPGA, Stratix 10—mainly focusing on models for the Fractional Phase-Locked Loop (FPLL) and Transmit Data Path

Ultrasonic Nondestructive Testing Lab, UofT

May 2015 - August 2015

Research Intern

Toronto, Canada

- Developed a method to detect weak adhesion using ultrasound and machine learning, resulting in a trained SVM that could predict bond strength with >95% accuracy (k-fold cross-validation, k=10) on one type of pipe
- Wrote signal processing code to extract decay constant feature: used low-pass filtering and windowing to extract peak locations of echo responses, and fit a decaying exponential function

PROJECTS

mylinks.ai

Co-founder

- Built a linkinbio tool that is simple to use and creates a beautiful profile. It directly embeds social media and other content from major platforms such as youtube, shopify, tiktok
- 300 accounts created with 30,000 profile views per month
- Tools used: figma, react, nextjs, vercel

Quickapply.io

Co-founder

- Built a tool for CS students to apply to 100+ internships using one form and one click
- \$500 MRR with over 500 users and 30,000 submitted applications
- Tools used: figma, react, selenium, ruby on rails, heroku

Correctme.ca

Founder

- Built marketplace for finding native speakers to review writing
- Received \$80 in revenue and (\$14) net income before closing down
- Made numerous costly mistakes including: over-engineering the MVP, targeting the wrong niche (broadly not doing enough market research), and not researching pricing

8x8x8 Blue LED Cube

- Designed, built, and programmed an 8x8x8 LED cube from scratch including base PCB and analog circuitry

Programming Competition Director, UTEK

- Programming Competition Director for University of Toronto Engineering Competitions
- Created app using City of Toronto Open Data map data (<http://toronto-route-planner.herokuapp.com/>)

EDUCATION

University of Toronto

June 2019

BASc in Engineering Science with Honors

- **Relevant Courses:** Machine Learning, Deep Learning, Algorithms, Robot Modelling and Control, Linear Control Systems, Random Processes, Operating Systems
- **Thesis:** Tailsitter Localization Using AprilTag and the Kalman Filter for Aerial Docking

TECHNICAL SKILLS

- **Languages/Scripts:** Golang, Python, Java, C++, Javascript, SQL
- Embedded systems programming
- Backend web-development + Data Engineering