

# Jonathan Gin

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## Skills

### Programming Languages

TypeScript/JavaScript, Ruby, Python, Go, Java, HTML/CSS (Proficient) • Lua, Rust, C (Prior Experience)

### Technologies and Frameworks

Ruby on Rails, GraphQL, MySQL, Kubernetes, React.js, Apache Spark, Apache Hadoop, Flask, JavaFX

## Experience

### Shopify - Caching Platform

Remote

PRODUCTION ENGINEER INTERN

Sep 2021 - Present

- Develop a generic developer interface for applications to access a distributed in-memory datastore (VECache) built on top of **KeyDB**.
- Instrument application monitoring using **OpenTelemetry** and analyze data in **Google BigQuery**.
- Create **Grafana** dashboards to visualize log data and implement real-time monitoring in **Splunk**.
- Deploy and manage VECache clusters across multiple regions using **Google Kubernetes Engine**.
- Implement automatic hotkey detection and dynamically resolve issue by splitting traffic across multiple clusters.

### Shopify - Checkout Orders

Remote

BACKEND DEVELOPER INTERN

Jan 2021 - Aug 2021

- Developed a large-scale application to power mission critical checkout flows for **over 1 million** shops using **Ruby on Rails** and **GraphQL**.
- Evaluated strategies to migrate legacy code to meet new requirements and achieve feature parity.
- Proposed, developed, and documented new domain objects to enable order editing and draft orders.
- Deployed automated load testing scripts and performed resiliency testing using **Toxiproxy**.

### Shopify - Experiment Platform

Remote

DATA ENGINEER INTERN

May 2020 - Dec 2020

- Built and launched internal experimentation platform, empowering teams to conduct cross-product **A/B tests**.
- Led a team of 3 to create a tool to calculate and visualize the sample size required to attain a target confidence level using Bayesian statistics.
- Identified and removed a bottleneck during experiment group partitioning, improving worst case performance by **99.7%**.
- Developed data pipelines to process and analyze data using **Python** and **Apache Spark**.
- Authored and documented new performance metrics written in **SQL**.
- Conducted usability testing sessions with data scientists to gather feedback and improve product.

### Shopify - Shopify Fulfillment Network

Toronto, Canada

FULLSTACK DEVELOPER INTERN

May 2019 - Apr 2020

- Worked on the Shopify Fulfillment Network prior to launch and supported application post-launch.
- Authored and documented **GraphQL** endpoints and constructed data models to support the application backend.
- Developed and maintained modular frontend components with comprehensive unit tests using **React**, **Jest**, and **Enzyme**.
- Wrote middleware to integrate internal APIs with third-party logistics providers.

## Featured Projects

### Dev Degree Dashboard | REACT, GRAPHQL, RUBY ON RAILS

- Built a fullstack web application to browse Dev Degree students' past projects and teams using **Ruby on Rails**, **React**, and **GraphQL**.
- Aggregated data from multiple sources and wrote a job to programmatically refresh data daily.
- Set up performance monitoring with **Datadog**, as well as error tracking and reporting using **Bugsnag**.
- Implemented user authentication, continuous integration, and continuous deployment using **Buildkite**.

### AutoDeck | NODE.JS, EXPRESS, REACT, GOOGLE CLOUD PLATFORM

- Built a slide deck creation tool that dynamically generates a PowerPoint presentation while the user is speaking.
- Created a Google Slides API client using **Express** and **Node.js** to manage slide elements in real time.
- Leveraged **Google Cloud NLP** for entity extraction and salience calculation.
- Selected as one of the winners at PennAppsXX (≈1250 participants).

### ProfitOverflow | PYTHON

- Created a cryptocurrency portfolio manager that automatically conducts high-frequency Bitcoin trading using predictions generated by a recurrent neural network built with **Keras** on top of **TensorFlow**.
- Trained model using data gathered via the Coindesk API and fetched real-time data from *cryptowat.ch* to generate bi-minutely predictions.
- Awarded first place prize at Hack the Hammer (≈100 participants).

## Education

### York University, Lassonde School of Engineering

Toronto, Canada

B.Sc., HONS. COMPUTER SCIENCE (INDUSTRY STREAM - DEV DEGREE)

Sep 2018 - Exp. May 2022

- Selected as one of ten students to participate in the Shopify Dev Degree program — a four-year work-integrated learning program offered by Shopify and York University that combines work experience on four different teams at Shopify with an accredited Computer Science Degree.