Jerry Deng

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Education

Carleton University | *Bachelor of Computer Science Honours, 3.9/4.0 GPA*   **Sep 2020 - Aug 2023**

Skills

Languages: Python, Java, Javascript, Ruby, SQL, Golang, C/C++, Rust, Lua, HTML, CSS, Bash
Technologies: React.js, Flask, Node.js, REST, GraphQL, Tensorflow, MySQL, Express.js, NGINX, Linux
Tools: Google Cloud Platform, Docker, Kubernetes, GKE, Terraform, Git, Agile, Wireshark, Jenkins CI

Experience

Shopify | *Infrastructure Engineer Intern*   **Jan 2023 - Aug 2023**
- Developed HTTP routing infrastructure with Google Kubernetes Engine, involving updating custom NGINX middleware written in Lua, managing DNS/SSL, configuring firewall rules, scaling Kubernetes pods and traffic
- Built observability tooling with Prometheus metrics and integrated request latency dashboards with alerts
- Implemented novel routing algorithms in Golang, **reducing latency for onboarded services by 40%**
- Provisioned Google Cloud Load Balancers in Terraform for a major service, **reducing p99 latency by 75%**
- Optimized Kubernetes pod discovery service in Golang to use **50% less memory**
- Refactored middleware for network metadata, removing the usage of Memcached from Kubernetes services, reducing storage requirements for several large Kubernetes clusters
- Improved custom continuous integration, allowing gradual multi-stage Kubernetes deployments by region

Shopify | *Backend Developer Intern*   **May 2022 - Dec 2022**
- Added a new section to the store screen of the Shop app, using Ruby to transform MySQL data into GraphQL APIs
- Interfaced new event-driven features in the Ruby backend with Kafka and Redis persistent storage
- Integrated Elasticsearch templates to add a new sort option for products, **ingesting 2 million records**
- Developed backwards-compatible pagination support, reducing GraphQL calls to load more data
- Added monitoring to backend services with StatsD metrics and Datadog alerts
- Debugged extraneous logic with distributed tracing, reducing feature flag overhead in several services

Shopify | *Software Engineer Intern*   **May 2021 - Apr 2022**
- Designed and integrated report editing buttons into a data platform website by creating React components in Typescript, **enabling archiving and locking reports for over 1000 developers and data scientists**
- Fixed CSS styling errors, resulting in correct links and improved flex layout for superior user experience
- Created more robust unit and integration tests for both frontend and backend services
- Developed Ruby GraphQL APIs to allow authenticated users to access restricted functionalities and datasets
- Owned pages of a major data discovery website revamp, drafting Figma designs, creating React components, transforming GraphQL queries with Typescript, resulting in **improved UI navigation for over 4000 employees**

Shopify | *Dev Degree Intern*   **Aug 2020 - Apr 2021**
- Completed 8-month training covering the fundamentals of Ruby, Rails, React, SQL, Git, Javascript, and Scrum

Nokia | *Future Tech Intern*   **Jul 2019 - Aug 2019**
- Developed production malware signatures using TCP/IP network analysis with Wireshark and bash scripting tools

Projects

Personal Website 🔗 | Typescript, React.js, Next.js, DNS
Bird Image Classifier 🔗 | Python, Tensorflow, Flask, REST API
- Used convolutional Neural Networks and data processing techniques to classify bird species based on images