

Lawrence Pan

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Focus: Distributed systems, Large-scale data processing/storage infrastructure

Languages: Scala, Java, Golang, Python, JavaScript, C/C++

Experience

Twitter | Software Engineering Intern

May 2019 - Present

- Designed and implemented a system (in Scala) on top of Hive Metastore that made Presto and Hive at Twitter GDPR-compliant.
- Adding two-phase commit support to Apache Heron (Twitter's stream processing engine), to enable end-to-end exactly-once delivery semantic. (in progress)

PlanGrid | DevOps/Infrastructure Engineering Intern

Sep 2018 - Dec 2018

- Implemented centralized authentication and path-based routing in PlanGrid's Kubernetes cluster using Envoy and Istio. This greatly improved developer productivity.
- Built Spinnaker pipelines to allow *phased rollout* for ingress-related infrastructure changes.
- Contributed to the effort of instrumenting distributed tracing to improve visibility.

Datadog | Software Engineering Intern

Jan 2018 - Apr 2018

- Worked on the metrics submission pipeline that streams millions of data points per second.
- Owned the time-series metadata creation service, written in Go, by ensuring its availability.
- Migrated the service's IPC layer to gRPC to improve reliability. Implemented consistent hashing and request termination, details in [blog post](#).

Universe | Software Engineering Intern (product)

May 2017 - Aug 2017

- Developed many business-critical, A/B-tested, user-facing features using React and Rails.
- Pioneered and shipped Universe's first front-end app that consumes its new GraphQL API.

Plotly | Software Engineering Intern (product)

May 2016 - Aug 2016

- Maintained and developed features for a [massive SaaS app](#) built with React and Redux.
- Contributed to the development of an e2e testing framework written in Python Selenium.

Writings

- [My one-liner Dropbox client](#) (**HackerNews front-paged**)
- [Lessons learned from writing a text editor in C](#) (**HackerNews front-paged**)
- [How gRPC helps improve reliability and fault tolerance at DataDog](#)

Education

University of Waterloo Bachelor of Software Engineering

Sep 2016 - May 2021 (expected)

90.3% cumulative GPA, *Dean's Honours List*