Andrew Liang

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Experience

Cruise • Software Engineer   *Aug. 2020 - Present*

San Francisco, CA

Cruise • Software Engineer Intern   *Sept. 2019 - Dec. 2019*

San Francisco, CA

- Contributed to next-generation autonomous vehicle performance simulators in **Python**
- Developed tool for **off-CPU** analysis of AV stack with **perf_events**, **eBPF**, and **Python**
- Built APIs for **jemalloc heap profiling** with **Python** and **C++**

Databricks • Software Engineer Intern   *Jan. - Apr. 2019*

San Francisco, CA

- Extended **Spark** runtime with **Scala** to support cluster, security, and library management
- Built mechanism for control plane to consume messages from **Spark** clusters with **Scala**
- Contributed to development of **instance pools**: user-facing caches for cloud instances used to reduce **Spark** cluster creation time by **90%**

NVIDIA • Distributed Storage Engineer Intern   *May - Aug. 2018*

Santa Clara, CA

- Contributed to core development of **AIStore**: a distributed storage system for AI in **Go**
- Invented a **petabyte-scale** distributed object shuffling layer in AIStore: bit.ly/2yeYxOc
- Implemented dynamic node **keepalive scheduler** based on TCP's RTO (RFC 6298)
- Evaluated performance bottlenecks at scale using **pprof, go-torch,** and **tcpdump**

Taplytics • Backend Engineer Intern   *Sept. - Dec. 2017*

Toronto, ON

- Created distributed user notification pipeline with **Cloud Pub/Sub** and **Cloud Functions**
- Built real-time webpage element classifier in **JavaScript** for A/B test recommendations

Wattpad • Platform Engineer Intern   *Jan. - Apr. 2017*

Toronto, ON

- Built an open-source client library in **Go** for interfacing with third-party ad-serving engine
- Implemented search APIs across microservices in **Go** to support new ad requirements

Skills

Languages

Go	Python	Java
Scala	C++	SQL

Technologies

Git	AWS	Thrift
Linux	GCP	K8s
Spark	Kafka	Jenkins

Projects

go-adzerk

HTTP client library in **Go** for interfacing with Adzerk's API

wattpoll

Microservice built with **Go** and **MySQL** which supports interactive polls on Wattpad

Interests

Distributed computing
Computer security
Barbering
Ultimate frisbee

Education

University of Waterloo

Bachelor of Software Engineering, 2015 - 2020