

# Andrew Liang

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## Experience

### Cruise • Software Engineer Intern

Sept. - Dec. 2019

San Francisco, CA

- Developing next-generation autonomous vehicle performance simulators in **Python** and contributing to performance-critical aspects of the AV in **C++**

### Databricks • Software Engineer Intern

Jan. - Apr. 2019

San Francisco, CA

- Extended **Spark** runtime using **Scala** to support verticals in cluster management, security, and user library management
- Architected mechanism for Databricks control plane to consume arbitrary messages from highly-distributed **Spark** clusters in the data plane using **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](https://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

### Paytm Labs • Data Engineer Intern

May - Aug. 2016

Toronto, ON

- Contributed to big data pipelines in **Python** and **Scala** to support product recommendation and built data products with **Spark**, **Elasticsearch**, and **Grafana**

## 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