



Andrew Liang

Software Engineering 2A

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Skills

Languages

Scala, Java, C/C++,
Python, JavaScript, Bash,
SQL

Technologies

Git, Akka, Node.js, Flask,
React, Redux, MySQL,
Jenkins CI, Azkaban,
BigQuery, Hadoop,
Grafana, UNIX

Education

University of Waterloo

Bachelor of Software
Engineering, 2015 - 2020

Awards

President's Scholarship of Distinction

University of Waterloo

Awarded to students with
an entry average of at
least 95%

Interests

Attending hackathons,
crosswords, acoustic
guitar, barbering

Experience



Data Engineering Intern

Paytm Labs • Product Personalization

May 2016 - Aug 2016

Toronto, ON

- Patched data processing pipelines in **Scala, Python** to ensure **seamless availability** of data
- Refactored **Scala, Akka** code to **decrease latency** for real-time API now serving **100M** users
- Created **Grafana** data dashboard using **Lucene** to visualize business and traffic stats
- Built tool in **Python, Bash** to concurrently execute N data processing flows to **reprocess over 2 TB of data**, cutting time needed to pay tech debt by **90%**
- Validated data sanity of user activity with **spark-shell** and **SQL**
- Built **Node.js** web app with **React/Redux** to visualize product recommendation metadata
- Wrote automated, fault-tolerant scripts with **Python, Bash** to **eliminate downtime** during deployment for real-time, client-serving apps
- Interfaced with **Azkaban, Jenkins, BigQuery, HDFS, Spark** to complete biweekly sprints

Projects

alexandria – Python, Flask, MySQL

Hack the North, September 2016

SMS-based, wifi-independent subscription service for reading public domain books on a phone. Built core API modules and data processing scripts for raw data ingestion and data seeding.

murmur – Scala, Akka

August 2016 – September 2016

WIP message-driven, actor-based group chat via the command line. Uses **akka-actor** for concurrency, scalability and **akka-stream** for message processing. Handles client messages with a WebSocket server.

Glide – Java, Android SDK

July 2015 – January 2016

Glider simulator for Android. Designed and implemented custom movement algorithms and practiced proper OOP principles. Published on the **Google Play Store**, achieving a **4.8** rating, with **1000** downloads.

C60 – JavaScript, Firebase

Hack the North, September 2015

Real-time Pebble smartwatch networking app which enables users to exchange contact details with nearby users. Simulates the effects of NFC.