

Andrew Liu

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in liuandrewk 🍯 MrPickles

Professional Experience

STAIRWELL

November 2020 – Present

- Built and scaled a query engine that indexes and serves data from around 1 billion unique files.
- Created a testing framework that allows engineers to generate synthetic browser traffic to production.
- { Go, PostgreSQL, Elasticsearch, Bigtable, Spanner, Pub/Sub, Kubernetes, Terraform, GCP }

SCALE AI

July 2019 – October 2020

- Wrote a pipeline to apply AI-generated labels onto images. Reduced the time it took for humans to label those same images by 30%.
- Built automation to prepay trusted contractors based off prior work, delivering over \$10,000 per week in wages.
- Started the machine learning infrastructure team. Created an app to allow non-engineers to retrain ML models with custom hyperparameters.
- Launched a public-facing dataset curation platform from scratch. It serves millions of images from various open source datasets.
- { TypeScript, React, Python, MongoDB, PostgreSQL, NATS, Kubernetes, GraphQL }

GOOGLE

August 2017 – July 2019

- Integrated re-authentication checks in Google's most critical account security flows, protecting over 400 requests-per-second of potential malicious traffic.
- Added Google Prompt support to the iOS Gmail app, tripling 2FA coverage for iOS users to 140 million users.
- Set up A/B tests on various authentication flows. Improved pass rate of Google Prompts by 10% and overall Google login success rate by 5%.
- Open sourced the Android version of Google Authenticator and migrated its build system to Bazel.
- { Java, Python, JavaScript, Bazel, gRPC, Jupyter/Colab }

DROPBOX

May 2016 – Aug 2016

- Reduced the load time of Dropbox's homepage by 33%. Conducted extensive investigation and optimizations around server performance.
- Implemented a promotional flow to encourage users to upgrade to Dropbox Business.
- { Python, React }

GOOGLE

May 2015 - Aug 2015

- Wrote an open source exploitability analyzer to detect buffer overflows and executable stacks within crashed binaries. It now triages every single Google Compute Engine instance that crashes.
- { C/C++ }

Education and Research

UNIVERSITY OF MARYLAND, COLLEGE PARK

Sept 2013 - May 2017

- BS in Computer Science, minor in Statistics
- GPA: 3.97/4.0 (Magna Cum Laude)

US ARMY RESEARCH LABORATORY

May 2014 - Aug 2014

- Coauthored "De-anonymizing Programmers via Code Stylometry," which was presented in USENIX 2015.