

Charles Lai

Software Engineer
Greater Seattle Area
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Airbnb

Dec 2018–Present

Staff Software Engineer – Trust Platform

Tech lead working on fraud detection and risk mitigation infrastructure to enforce policies, build trust, prevent misuse, and protect against global abuse at scale.

- Oversaw strategy for a centralized Scala rules engine evaluating ~300M events per day with ML and heuristics leveraged by 100+ developers across Airbnb.
- Spearheaded a low-code rules platform with feature store, LLM support, and Airflow/Spark backtesting integrations which cut rule launch times over 98%.
- Designed reliability improvements for an entity restrictions system, achieving six-nines uptime at 60k QPS and saving millions in recurring incident loss.
- Established a unified offense tracking service in Java with structured taxonomy to record, aggregate, and enforce community policy violations and strikes.
- Led engineering excellence initiatives on alerts and established widely adopted best practices resulting in 50%+ reduction in alert noise across the company.

Yelp

Jul 2016–Nov 2018

Software Engineer – Core Experience

Full-stack backend and web developer building new consumer products aimed at improving the Yelp reader experience and drive user retention.

- Designed and implemented MySQL backend to share and follow bookmark collections, introducing 0-1 social interactions and marketing features on Yelp.
- Relaunched business recommendations by migrating from a frozen legacy graph search to batch-loading ML recommendations into Cassandra.
- Bootstrapped tooling to parse raw experiment metrics from Redshift into a readable format saving hours of manual data analysis for product stakeholders.
- Helped lead a cross-org initiative to migrate Yelp business pages to React

Datadog

May 2015–Jul 2015

Software Engineer Intern

- Designed public developer APIs to manage graph embed and user accounts.
- Updated open-source client libraries, fixed XSS/SQL vulnerabilities, and shipped performance optimizations for Datadog's core Python web application.

Cornell University

Class of 2016

B.S. Computer Science, Cum Laude

Teaching Assistant (CS 1300 / CS 2300 / CS 3410)

Research Assistant (ReImagination Lab)