Andrew Ho

github.com/anmho
andrewho.io

EDUCATION

University of California, Irvine — Expected June 2025
B.S. in Computer Science — *GPA 3.7*
Courses: Efficient ML Computing, NoSQL, Search Engines, Distributed Systems, Operating Systems, Databases

EXPERIENCE

Tesla | Software Engineer Intern — Incoming Sep. 2024
Engineering Automation Software — *Palo Alto, CA*
- Full-stack developer working on engineering and simulation software using *React*, *Typescript*, *Kafka*, *AWS*, and *Go*

Snap Inc. | Software Engineer Intern — Jun. 2024 - Present
Messaging Core Service — *Los Angeles, CA*
- Developed new features for the Snapchat messaging core service using *Go*, *gRPC*, *DynamoDB* and *AWS*
- Collaborated closely with mobile engineers to successfully deliver new chat wallpaper feed bumps and notifications, resulting in a 1.2% increase in Snapchat+ subscriptions and improved chat send metrics.
- Created chat clear feature reducing media storage costs by 1.2% for $500,000 in annual savings.

Snap Inc. | Software Engineer Intern — Sep. 2023 – Oct. 2023
Ads Analytics Platform — *Los Angeles, CA*
- Designed and implemented multi-dimensional range partitioning for *Apache Druid* analytics database cluster
- Created *Apache Beam & Spark (PySpark)* pipelines to evenly distribute rows across data segments
- Eliminated hot-keys with salted range indexes *quantile sketches* improve query speed, and reduce compute by **35%**
- Served analytics data through *Hasura GraphQL* proxy to *React* dashboard, reducing load times by **13%**

Snap Inc. | Software Engineer Intern — June 2023 – Sep. 2023
Metrics Stream Processing — *Los Angeles, CA*
- Deployed *Apache Kafka* cluster using *Kubernetes* to process *200TB/day* analytics metrics stream
- Developed real-time data warehouse ingestion into *Google Cloud Storage* using *Apache Druid* streaming ingestion
- Integrated with *Envoy* service mesh using *Go*, *gRPC*, and *Helm* saving infra costs by *24%*

Operating Systems Course Assistant — Apr. 2024 – Jun. 2024
UCI School of Computer Science — *Irvine, CA*
- Assisted students with operating systems coursework in *C* for processes, threads, memory, networking
- Held weekly office hours to assist students with assignments and concepts of operating systems

PROJECTS

Ride Reservation API | *Go, Postgres, Stripe, NATS, Redis*
- Developed a ride reservation API with idempotency key system for handling request failures and safe retries.
- Implemented a transaction-based approach to atomically commit changes and recover from failures across phases.
- Utilized Stripe's API to create charges and manage payments.
- Designed and implemented a background job system with NATS to handle async tasks like sending email receipts.

Distributed Key-Value Store | *C++, Go, gRPC, Docker, Kubernetes*
- Developed multithreaded distributed key-value store cluster in *Go*, using *Raft*, *LSM trees*, and bloom filters
- Implemented hot-cold system using LRU eviction and compaction.

Web Search Engine | *C++, Python, React, Redis, Docker*
- Created a search engine that parses 55,000+ pages, returning high relevance results within 300ms using PageRank

TECHNICAL SKILLS & AWARDS

Languages: Go, Python, Java, TypeScript, Scala, HTML, CSS, SQL, R, C, C++
Tools/Frameworks: AWS, Google Cloud, Docker, gRPC, GraphQL, React, Flask, Django, Kafka, PostgreSQL, MySQL, Git, MongoDB, Cassandra, Spark, Stripe, PyTorch, pandas, numpy