Andrew Ho

github.com/anmho
andrewho.io

EDUCATION

University of California, Irvine — Expected June 2025
B.S. in Computer Science, Minor in Statistics — **GPA 3.87**
Coursework: Relational Databases, NoSQL, Algorithms, Search Engines, Distributed Systems, Operating Systems
Organizations: ICS Student Council Project Committee, Hack at UCI Technology Organizer

EXPERIENCE

Snap Inc. | Ads Insights Backend — Sep. 2023 – Oct. 2023
Software Engineer Intern — *Santa Monica, CA*
- Rewrote multi-dimensional range partitioning algorithm for **Dataflow & Spark** pipelines in **Java** using **quantile sketches**, resulting in **35%** improvement in query performance and resource consumption due to data locality
- Scheduled jobs using **Apache Airflow** to synchronize massive amounts of data with Maven, and **Helm** charts
- Maximized **concurrency** and rollup ensuring evenly distributed hot-key across worker nodes.

Snap Inc. | Ads Stream Processing Infra — June 2023 – Sep. 2023
Software Engineer Intern — *Santa Monica, CA*
- Orchestrated **Apache Kafka** cluster with **Kubernetes** to support streaming analytics ingestion for **Google Cloud Storage**, using **Apache Druid** on **Compute Engine** clusters processing **200TB** data stream each day
- Developed streaming ingestion for big data visualization platform for Snap ranking and engagement ML models
- Spearheaded service mesh integration with **Confluent** Platform, **gRPC**, **Golang** - projected cost savings 31%

University of California, Irvine | HR Tools and Event Services — Dec. 2022 – June 2023
Backend Web Developer — *Irvine, CA*
- Created a data exploration tool to assess employee performance and streamline data export to annual reports, saving 100+ employee hours during fiscal year-end. Utilized C#, ASP.NET, AWS EC2, Jenkins, and SQL Server
- Updated event booking service waiver tools to unify schoolwide event planning, accelerating event planning by 20%

PROJECTS

Web Search Engine | *Python, Go, React, CockroachDB, Redis, Docker, React*
- Created a search engine that parses 55,000+ pages, returning high relevance results within 300ms using PageRank
- Implemented multithreaded web crawler, index sharding, and caching search results in **Redis** to fast queries
- Utilized OpenAI GPT-4 API to generate page summaries for search results shown on **React** frontend.

Zotlease - Student Housing Marketplace | *Go, React, React-Native, CockroachDB, Stripe, AWS, Supabase Auth*
- Built unified platform students to find subleases, roommates, and housing using **React**, **React-Native**, **Go**, **CockroachDB**, and **Stripe Connect**
- Implemented automated payment processing using Stripe Connect to improve user experience and security

Multithreaded Distributed Key-Value Store | *Go, gRPC, Docker, Kubernetes*
- Developed a highly performant, distributed key-value store in **Go** with multithreading support, using the **Raft** consensus algorithm for fault tolerance and replication, with support for dynamic node scaling
- Designed hot-cold tier lookup system to optimize resource consumption using LRU eviction to persistent claims

Movie Recommendation Engine | *Java, Python, PostgreSQL, Spark, gRPC, Kubernetes*
- Built **Spring Boot** and **FastAPI** AI movie recommendations micro-services with **Google Kubernetes Engine**
- Trained collaborative filtering ML ranking model on MovieLens **2.5m** dataset using **PyTorch** and distributed training for rapid model updates with **Spark**

TECHNICAL SKILLS/AWARDS

Languages: Python, Go , Java, TypeScript, Scala, JavaScript, HTML, CSS, SQL, R, C, C++
Frameworks: Spring Boot, Flask, Django, Kubernetes, Docker, gRPC, GraphQL, AWS, Google Cloud, React.js, PostgreSQL, MySQL, Node.js, Git, MongoDB, Cassandra, DynamoDB, PySpark, Stripe, PyTorch, pandas, numpy
Awards: Winner of **Stanford**'s health{hacks} 2021 hackathon out of **178** participants. Presented a stochastic agent-based machine learning pandemic simulation tool built over 24 hours to a panel of **9** Ivy League judges.