# Andrew Ho

github.com/anmho
andrewho.io

## EDUCATION

**University of California, Irvine**  Expected June 2025
*B.S. in Computer Science*  **GPA 3.71**
**Coursework:** Relational Databases, NoSQL, Algorithms, Search Engines, Distributed Systems, Operating Systems

## EXPERIENCE

**Software Engineer Intern | Messaging Services**  June. 2024 - Sep. 2024
*Snap Inc.*  *Los Angeles, CA*
- Incoming backend and machine learning intern on Snapchat messaging platform. Working with *Go, PyTorch, AWS*

**Software Engineer Intern | Monetization Platform**  Sep. 2023 – Oct. 2023
*Snap Inc.*  *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 using *quantile sketches* and salted range indexes to eliminate hot-keys and improve query speed and compute costs by **35%**
- Served analytics data through *Hasura GraphQL* proxy to *React* dashboard, reducing load times by **13%**

**Learning Assistant | ICS 53 – Principles of System Design**  Apr. 2024 – Present
*University of California, Irvine*  *Irvine, CA*
- Assisted students with operating systems coursework including syscalls, processes, threads, virtual memory, scheduling, networking, and synchronization
- Held weekly office hours to assist students with assignments and concepts of operating systems

**Software Engineer Intern | Ads Analytics**  June 2023 – Sep. 2023
*Snap Inc.*  *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%**

**L4 Software Engineer | Event & Booking Services**  Dec. 2022 – Present
*UCI Student Center & Event Services*  *Irvine, CA*
- Spearheaded a data analysis dashboard to assess employee performance and streamline data export to annual reports, saving **100+** employee hours during fiscal year-end using *C#, .NET, Typescript, D3.js, and SQL Server*
- Overhauled employee management tools such as *LevelUp* performance review platform, booking and reservation services to streamline planning procedures

**Projects Team Developer**  Nov 2023 – Present
*ICS Student Council*  *Irvine, CA*
- Developing a dining tracker to view dining hall menus, schedules, and nutrition facts using *React-Native*
- Built serverless backend to process 100+ dishes per day ZotMeal using *AWS Lambda, API Gateway, Typescript, Node.js, and PostgreSQL (AWS RDS)*

## PROJECTS

**Bobarank – Bubble Tea Leaderboards** | *React, Typescript, Next.js, Tailwind, Postgres*
- Built a platform for users to discover the best boba stores in their area
- Users can vote in in Head-to-Head competitions to update the elo rankings of boba stores

**Map Reduce Implementation** | *Go, Docker, Amazon Web Services*
- Implemented a distributed MapReduce framework using Go for parallel processing of large datasets
- Driver process distributes tasks among workers and handles worker failures through RPC communication

**Distributed Key-Value Store** | *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.

## TECHNICAL SKILLS & AWARDS

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