

# Andrew Ho

github.com/anmho  
andrewho.io

## EDUCATION

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**University of California, Irvine**

Expected June 2025

*B.S. in Computer Science*

*GPA 3.66*

**Courses:** Efficient ML Computing, NoSQL, Search Engines, Distributed Systems, Operating Systems, Databases

## EXPERIENCE

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**Snap Inc. | Software Engineer Intern**

Incoming June. 2024

*Messaging Platform*

*Los Angeles, CA*

- Incoming backend and machine learning intern on Snapchat messaging platform. Working with *Go, PyTorch, AWS*

**NASA | MCA Developer**

May. 2024 – Present

*Lucy Mission*

*Los Angeles, CA*

- Prototyped rover development for Lucy space mission using Python and PyTorch.
- Collaborated with interdisciplinary teams to advance understanding of the early solar system.

**UCI Student Center | L4 Web Developer**

Dec. 2022 – Present

*Web Team*

*Irvine, CA*

- Created new 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*.
- Migrated services from Windows server on AWS to Ubuntu to streamline CI/CD lifecycle.

**Operating Systems Learning Assistant**

Apr. 2024 – Present

*Donald Bren School of Computer Science*

*Irvine, CA*

- Assisted students with operating systems coursework including syscalls, processes, threads, memory, networking
- Held weekly office hours to assist students with assignments and concepts of operating systems

**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%*

## PROJECTS

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**Map-Reduce Implementation** | *Go, Docker, Amazon Web Services, Kubernetes*

- 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

**Vision Transformer Finetuning QLoRA** | *PyTorch, Vertex AI, Torchserve*

- Utilized Flash Attention and knowledge distillation to finetune 10B model for various object detection tasks.
- Applied QLoRA NF4 quantization resulting in 85% latency reduction

**Web Search Engine** | *Python, Go, React, Redis, Docker, React*

- Created a search engine that parses 55,000+ pages, returning high relevance results within 300ms using PageRank

## TECHNICAL SKILLS & AWARDS

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**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