# ANDREW HING

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## PROFESSIONAL SUMMARY

Software Engineer with experience building production ML and backend systems, including distributed agent pipelines, event-driven architectures, and cloud-native deployments. Strong in Python, AWS/GCP, and LLM-powered systems

## EDUCATION

**Stevens Institute of Technology**                                    *Sep 2025 — May 2026*
*Master of Science*

**Stevens Institute of Technology**                                    *Sep 2021 — May 2025*
*Bachelor of Science*

## EXPERIENCE

**Software Engineer Intern**                                          *Jun 2025 — Aug 2025*
*Granite Telecommunications*                                              *Quincy, MA*

- Engineered a production-grade multi agent automation system (LangGraph, DSPy) that reduced telecom ticket intake time by 98% across NOC operations.
- Designed an event-driven architecture using Kafka, PostgreSQL, and Cloud Tasks to support concurrent ticket routing, SLA-based scheduling, retries, and fault recovery.
- Deployed Dockerized microservices to GCP Kubernetes with CI/CD pipelines, distributed tracing (OpenLit), metrics (Prometheus), and Grafana dashboards for system observability.

**Machine Learning Engineer**                                        *Sep 2025 — Oct 2025*
*Anote AI*                                                             *Las Vegas, NV*

- Built an AI reasoning engine and real time data fusion pipeline that transformed multimodal battle data into hypergraph based Courses of Action (COAs), reducing generation time by 98%.
- Acted as primary liaison with U.S. Air Force personnel, translating operational requirements into validated software solutions.

**Course Assistant for CS 546: Web Programming**                     *Sep 2024 — Present*
*Stevens Institute of Technology*                                        *Hoboken, NJ*

- Supported 150+ students through structured guidance and one-on-one debugging, contributing to improved course satisfaction and outcomes.

## PROJECTS

**Prospra** | Next.js, FastAPI, Clerk, PostgreSQL, Docker, AWS EC2

- Designed and implemented a full-stack platform using Next.js and FastAPI that generates job-specific projects and interview preparation workflows using AI.
- Built a modular backend integrating authentication (Clerk), billing (Stripe), and AI services, containerized with Docker and deployed on AWS EC2.

**Real Time Sentiment Analysis for Social Media** | React, FastAPI, Kafka, MySQL, AWS

- Built a real-time sentiment analysis pipeline using Kafka (AWS MSK) and FastAPI to ingest, process, and store social media data at stream scale.
- Implemented Kafka producers/consumers, trained sentiment models with scikit-learn, and persisted results in MySQL (AWS RDS).

## SKILLS

**Programming Languages:** Python, JavaScript, SQL, C/C++, Java, HTML, CSS
**Frameworks & Libraries:** DSPy, LangChain, React, Next.js, Express, Flask, FastAPI, Node.js
**Databases:** PostgreSQL, MongoDB, MySQL
**Developer Tools:** Docker, AWS, GCP, Git, Postman, Firebase, Jira