Andrew Z. Ho

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EDUCATION

University of California, Irvine   Expected March 2025
Bachelor of Science, Computer Science
Relevant Coursework: Data Structures and Algorithms, Artificial Intelligence, Software Testing and Validation, Embedded Systems, Operating Systems, Machine Learning/Data Mining, Data Management

PROJECTS

NeuroLink *Python, SQL, React, FastAPI, PostgreSQL, Tailwind, CSS, OpenAI*   January 2025
- Developed a full-stack application analyzing stress levels using photo plethysmography (PPG), processing 10,000+ data points.
- Engineered a data pipeline to extract biological markers from PPG signals using the NeuroKit API, generating a quantified "stress score" for clinical use, achieving 91.1% accuracy with traditional sampling techniques reducing manual evaluation time by 60%
- Integrated OpenAI's GPT API for personalized stress-reduction techniques, improving user adherence by 25%.
- Built a secure FastAPI backend with JWT authentication, managing 100+ user sessions without security breaches.

AI Flight Itinerary Creator *Python, MongoDB, React, FetchAI, OpenAI*   October 2024
- Integrated **Fetch.AI**'s decentralized AI agents enabling the automation of trip planning tasks and reducing manual workload by **60%**
- Utilized **MongoDB** for efficient storage and management of complex data, leading to a **25%** improvement in system performance and response times

YouTube Video Downloader *Python, Backend, Frontend*
- Users needed a powerful and simple way to download YouTube videos
- Created a dynamic video downloader with a GUI, utilizing **Python** and **Tkinter**, reflecting skills relevant to developing engaging user experiences.
- Delivered an enhanced interactive experience, significantly streamlining user video download processes.

Automated Financial Manager *Python, SQL*
- Wanted a tool to quickly and easily categorize transactions and manage financials.
- Developed a tool for automated transaction categorization and updates to Google Sheets, highlighting **data manipulation** and **automation** skills applicable to handling large datasets.

WORK EXPERIENCE

Convo, Remote   January 2025 – Present
Software Engineer *JavaScript, WebRTC, Python, Jest, Mocha, OpenAI, Hume*
- Developed and implemented mute/unmute functionality using WebRTC, improving audio interaction and increasing user engagement by 25%.
- Designed and executed API test cases, enhancing API reliability and reducing failure rates by 30%.
- Optimized system performance by identifying and resolving bottlenecks, reducing application latency by 20%.

New York Proton Center, New York, New York   June 2024 – Present
Software Engineer *SQL, Python, Power-BI*
- Tasked with the creation of a financial data warehouse in order to streamline data management and enhance reporting.
- Developed and optimized a financial data warehouse using SQL for ETL processes and warehouse creation Created and maintained data models and schemas to support complex financial reporting needs which reducing data retrieval time by 50%.
- Developed interactive dashboards and reports in Power BI, collaborating with cross-functional teams to ensure tailored solutions for specific reporting requirements. This helped enhance data-driven decision-making by 30%.
- Significantly improved data accuracy and reporting efficiency, providing the finance team with reliable and actionable insights. Enhanced decision-making capabilities by delivering timely and precise financial data, fostering a culture of data-driven decision-making within the organization.

Mingley, Remote   May 2024 - September 2024
Software Engineer - Backend
- Enhanced system integration and performance, ensuring that backend solutions are aligned with business goals and capable of supporting rapid development and operation cycles.
- Led the design and implementation of RESTful APIs and robust SQL databases. Spearheaded the development of scalable backend architecture and coordinated with cross-functional teams for seamless alignment and execution.
- Achieved a 20% reduction in latency, significantly enhanced user experience and system performance, and enabled faster feature deployment, and improved system reliability and security, directly contributing to key project milestones.

SKILLS

Programming Languages: Python, C++, C, C#, Java, TypeScript, JavaScript, SQL, CSS, html
Tools & Frameworks: FastAPI, React, Next.js, PostgreSQL, MongoDB, Docker, VSCode, Git, GitHub, Supabase, Swagger, Power BI
Data & AI Skills: Data Analytics, Machine Learning, NLP, ETL Pipelines, Signal Processing, AI Model Deployment
Other: Project Management, Strong Communication Skills, Time Management, System Design