Andrew Wang

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Education

University of California, Irvine — Irvine, CA
B.S. Computer Science — GPA: 3.92 — *June 2026*

Experience

UCI Machine Learning Repository — June 2024 - Present
Full-Stack Developer — *Irvine, CA*

- Developed UC Irvine's machine learning database with 3M yearly active users using Svelte, Typescript, and tRPC
- Introduced 40+ new features and maintained responsiveness using Tailwind CSS, Daisy UI, and Figma
- Managed an Nginx Docker deployment and MySQL database using PrismaORM to manage 1K+ datasets

ICS Student Council — September 2023 - Present
Project Lead - Anteater API — *Irvine, CA*

- Lead a team of 6 developers on an open-source REST & GraphQL API providing university data to 40K+ users
- Engineered a Hono backend using TypeScript, Drizzle ORM, and Docker with web scrapers built with Cheerio.
- Deployed on Cloudflare Workers to serve 500K+ daily requests with a Postgres database hosted on AWS RDS

Naval Postgraduate School — June 2022 – September 2023
Software Engineering Intern — *Monterey, CA*

- Architected PyTorch Attention-based decision trees to optimize close-in defense systems against missile raids
- Optimized weapons loadouts and defense doctrines on 70+ ships to increase simulated survivability by 12%
- Analyzed fragmentation and plate damage statistics in MatLab to formulate new percent kill algorithms

Navy MOVES Institute — June 2024 - September 2024
Software Engineering Intern — *Monterey, CA*

- Modeled distributed drone operations for anti-submarine warfare using Lua scripting in wargaming environments
- Analyzed autonomous sonobuoy deployment patterns in Python Pandas to demonstrate an 80% targeting success
- Developed C++ libraries using the OpenDis protocol for real-time Monte-Carlo analysis and visualization

Applied Solar Energy — June 2023 - September 2023
Data Analyst Intern — *Pacific Grove, CA*

- Analyzed PG&E bills using Python Fourier analysis to model consumer electricity and gas usage habits
- Developed JavaScript algorithms to locate 200+ homes with high solar potential using OpenSolar 3D map data
- Created a SparkSQL database of 50+ solar panels and batteries for efficient analysis with Pandas and PySpark

Projects

GE-Z: CC Course Search | *TS, Express, Prisma, Postgres, OpenCV* — November 2023 – Present

- Developed an Express.js backend for a comprehensive community college course finder with 250+ monthly users
- Built a custom PDF parser using Python, OpenCV, and Tesseract OCR to extract course data from 2K+ files
- Designed a Postgres database with PrismaORM and deployed on AWS Lightsail to efficiently store 100K+ courses

Assessem: CS Education Software | *PHP, Laravel, Livewire, Tailwind* — August 2023 – Present

- Developed a website providing CS learning solutions for 400+ college students using PHP, Laravel, and Livewire
- Designed automated Docker containers to securely test Java code submissions on an Apache web server
- Architected an SQLite database integrated with the CanvasLMS API to automate assignments and grading

Navy Efficient Rocketry Project | *C++, RaspberryPi, Python* — June 2023 – September 2023

- Integrated and optimized RaspberryPi inertial measurement microcontrollers for decoy rockets
- Preformed Python analysis on historical flight data to tune proportional-integral-derivative stabilization algorithms
- Developed C++ programs with the Raspberry Pi SDK to account for control lag & prevent fin over-correction

Technical Skills

Languages: JavaScript, TypeScript, SQL, HTML, CSS, Python, Java, Kotlin, C++, C#, PHP, Lua, R, Matlab, Julia
Tools & Libraries: Git, Bash, Node, Express, Prisma, PostgreSQL, MySQL, Redis, MongoDB, Docker, REST, GraphQL, Next.js, React, SvelteKit, Laravel, Tailwind, WebSockets, PyTorch, Unity, Google Cloud, AWS, Cloudflare