Christopher Alpuerto

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Education

California State University, Fullerton — Fullerton, CA
B.S. Computer Science — *Expected Graduation: May 2026*

Relavent Coursework

Advanced Data Structures & Algorithms, Algorithm Engineering, Software Engineering, Operating Systems, Artificial Intelligence, Python, Advanced C++, Linear Algebra

Experience

Co-Founder & Lead Engineer — July 2025 – Present
HoopTuber — *Los Angeles, CA*

- Built and deployed a full-stack basketball app, serving **400+** waitlist signups and **50+** daily beta users, validating the system's scalability and early market demand.
- Collaborated with co-founder using agile-style planning (Jira boards, sprint tasks, PR reviews) to prioritize features and track releases
- Owned backend architecture and cloud deployment, enabling secure uploads, job tracking, and subscription workflows

Facility Attendant — May 2023 – Present
City of Glendale — *Glendale, CA*

- Managed customer registration and membership data within a NoSQL style RecTrac database, ensuring accurate resident records, secure transactions, and real-time updates across City of Glendale systems

Projects

HoopTuber | www.hooptuber.com — July 2025 – Present

- Designed event-driven pipeline using FastAPI, Firestore, and Pub/Sub to coordinate video processing and user notifications
- Integrated payment and access control with Stripe and RBAC to gate premium features
- Built authenticated upload flow with GCS signed URLs and job state management for scalable video ingestion

Cloud-Run Video Encoder | GitHub — Dec 2025 – Present

- Built an FFmpeg media normalization pipeline with Python to convert iPhone HEVC/.MOV to H.264/.MP4, eliminating codec incompatibilities that previously caused analysis failures on 30–40% of uploads inside **HoopTuber**, increasing our successful analysis rates up 35%.
- Containerized the service with Docker and deployed via GitHub Actions CI/CD, enabling reproducible processing across local and Cloud Run environments while reducing debugging time for corrupted HEVC inputs.

Car Infotainment System | Live Demo — August 2025 - Present

- Worked within a team of 4, leading the backend development of a real-time automotive dashboard using FastAPI, building services for authentication, Spotify control, navigation, and weather integrations
- Engineered a WebSocket streaming layer to broadcast live vehicle telemetry (RPM, speed, temps) from mock generators and real OBD-II hardware to read real ECU data from a physical vehicle with low-latency updates
- Designed and implemented REST APIs with FastAPI for Mapbox routing, Spotify media control, and user management, with role-based access control and OAuth authentication

Automated Trading System For ETFs | GitHub — Aug 2024 – Dec 2024

- Developed an automated trading system for FNGU/FNGD with a backtesting engine simulating trades on a $100K virtual balance, implementing SMA, Bollinger Bands, and MACD strategies to generate dynamic buy/sell signals
- Built and deployed a full-stack platform with Flask and JavaScript/HTML on Heroku, using the Yahoo Finance API to visualize historical ETF data, custom date ranges, and strategy performance

Technical Skills

Languages: Python, TypeScript, JavaScript, Go, SQL, C++, Bash, HTML / CSS
Frameworks: React, Node.js, Next.js, Flask, FastAPI, PyTorch, Tensorflow
Tools: Git, GitHub, GitHub Actions, Docker, VS Code, GCP Services, AWS S3, Jira
Concepts: REST APIs, CI/CD, WebSockets, Agile/Scrum, Database Design, Cloud Deployment RBAC, API Design