

Duane Cabahug

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Education

California State University, Northridge

Expected Dec 2027

B.S. Computer Science, Minor in Data Science — GPA: 3.62

Northridge, CA

- **Relevant Coursework:** Data Structures & Program Design, Advanced Data Structures, Algorithm Design, Software Engineering, Internet Programming, Senior Design Project, Networks & Security, Computer Architecture, Probability & Statistics
- **Involvement:** Tau Beta Pi Engineering Honor Society; Society of Software Engineers

Experience

Global HSI - Autodesk Technology Engagement Center

May 2026 – Present

Software Engineering Intern

Northridge, CA

- Ship full-stack features in a production React and TypeScript codebase powering internal tooling and a customer-facing engagement platform used by enterprise clients.
- Integrate AWS services including RDS, S3, and Amplify to deliver authenticated data access and automated deployments for production workloads.
- Build a native iOS application in Swift and SwiftUI, implementing UI screens, navigation flows, and REST API integration against existing backend services.
- Design and implement CRUD REST APIs in Django backed by PostgreSQL, validating endpoints with Postman and covering critical UI flows with Playwright end-to-end tests.
- Collaborate with engineers and designers through Git-based code review and iterative delivery in a production workflow.

Borale - Autonomy Research Center for STEAM (ARCS)

Aug 2026 – Present

Full-stack Developer, Platform Team

Northridge, CA

- Develop React front-end interfaces for a NASA-funded research platform that ingests and visualizes wearable body-sensor data for researchers.
- Build and maintain REST APIs in Python and FastAPI backed by PostgreSQL, designing schemas and queries for high-volume time-series sensor data.
- Containerize services with Docker and coordinate delivery across a multidisciplinary research team using Git/GitHub pull requests and Jira sprint tracking.

Ventura County Department of Child Support Services

June 2024 – August 2024

Systems Administration Intern

Camarillo, CA

- Automated software deployment across 100+ machines using SCCM workflows, increasing update reliability by 50% and eliminating repetitive manual installs.
- Modernized legacy ASP.NET intranet pages serving 200+ internal users, improving accessibility compliance, navigation clarity, and maintainability.

Projects

Argus | Python, YOLOv8, OpenCV, Raspberry Pi, Supabase, Next.js

April 2026

Real-time person detection system with automated clip capture and remote dashboard

- Built an end-to-end computer vision pipeline on a Raspberry Pi 5 using YOLOv8 nano and OpenCV to detect people in real time and automatically capture short video clips on high-confidence detections.
- Engineered an event-driven storage pipeline that uploads video clips to Supabase Storage and saves only the resulting URLs to PostgreSQL, avoiding binary data in the database.
- Developed a Next.js dashboard with Supabase Realtime subscriptions to display live detection events, clips, and thumbnails with push notification support.

Technical Skills

Languages: TypeScript, JavaScript, Python, Swift, SQL

Frameworks: React, Next.js, Node.js, FastAPI, Django, React Native, SwiftUI

Cloud & Tools: AWS (RDS, S3, Amplify), PostgreSQL, Supabase, Docker, Git/GitHub, Postman, Playwright, Jira

Practices: Agile/Scrum, Software Development Life Cycle, REST APIs, CI/CD, Unit & End-to-End Testing