Dante Fernandez *Software Engineering Intern*

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SUMMARY

Computer science student (Cal State LA Blended B.S./M.S., expected **May 2028**) seeking a **Summer 2027 software engineering internship**. Ships backend and full-stack software for real users: a market data platform **500+ traders** use, a public crash-safety map in **5 languages**, and an LLM agent system with **100+ automated tests**. Problem solver who works independently, communicates clearly, and owns projects end to end, from design through testing, debugging, and deployment.

SKILLS

Data & Analysis: SQL (PostgreSQL, SQLite), Python (Pandas, NumPy, scikit-learn), Excel, statistics & probability, quantitative analysis, statistical modeling, machine learning, time-series analysis, data cleaning, ETL / data pipelines, database design, dashboards & data visualization
Finance & Markets: financial markets, options & derivatives, futures, risk management, trading signals, backtesting, gamma exposure (GEX), market data (SEC Form 4, FINRA OTC, live price feeds)
Quantum: Qiskit, Qiskit Aer, Mitiq, QAOA (combinatorial optimization), QUBO/Ising formulation, variational classifiers, error mitigation (ZNE, CDR)
Engineering: Git, Linux/Unix, Docker, FastAPI, REST APIs, unit testing (pytest), LLM agents (Claude Agent SDK), cloud deployment (Railway, Vercel, Supabase), Java (OOP, Spring Boot), TypeScript/React, C (memory management, multithreading, OpenMP)

RESEARCH

Undergraduate Researcher, Quantum Computing | **Prof. Micah Shaw, SemperKite Lab** *Qiskit · Aer · Mitiq* Fall 2026 – Present

- Proposed a study of **error mitigation for higher-order (HUBO) QAOA**: native HUBO vs. QUBO-reduced circuits under noise, with zero-noise extrapolation (ZNE) and Clifford data regression (CDR); fills a gap left by two 2025 papers (simulation-only, or no mitigation).
- Built the Qiskit pipeline: 5-asset portfolio selection (pick 3, budget cap, sector-risk and hedge terms) as a 9-qubit QUBO → Ising → QAOA; at depth 2 it **matches the brute-force optimum**.
- Added Aer noise + Mitiq ZNE (recovered **40–80%** of noise-induced error); caught an oversized constraint penalty drowning the objective; cut run time ~**30**×.

EXPERIENCE

Robotics & Coding Instructor | **MagiKids** Sep 2026 – Oct 2026

- Taught students to build and code **VEX IQ robots** — from the first build to a robot that runs on its own program.
- Selected to coach the program's **VEX IQ competition team**; led private Python and Java lessons.

Senior Recreation Leader | **City of Temple City Parks & Recreation** Feb 2023 – Present

- Manages program financial records and invoices 3 partner organizations for field lighting ($800–$1,300 each per month); prepares operations reports for city staff.
- Promoted to the **youngest Senior Lead** in department history (Oct 2025); manages staff schedules and day-to-day operations.

College & Career Coach | **College Contact Network** *Remote* Feb 2026 – Present

- Advises high school students and families on colleges, majors, and STEM careers; runs application-planning sessions with school districts.

Computer Science Instructor | **Whizara (Learn2Code)** Sep 2025 – Nov 2026

- Led Python and Scratch classes for K–12 students; planned lessons and tracked each student's progress.

Options Trader & Trading Mentor | **Self-directed** 2024 – Present

- Trades options and equities for **2+ years** under a written risk-management plan; logs every trade in a journal database I built to track win rate and rule compliance.
- Teaches traders risk management and how to read options flow; one client made **$20K+ in one week** following my calls within strict risk rules.

PROJECTS

Flow Scanner — Stock Market Alert Tool *Python · SQL · Pandas · FastAPI* flowscanner-production.up.railway.app Apr 2026 – Present

- Designed and launched, using AI-assisted development, a stock market tool used by **500+ traders** that brings multiple data sources into one place — futures, options chains, SEC insider filings, FINRA trading reports, and live price feeds — and turns them into 7 views: options flow, sector strength, unusual activity, gamma exposure (GEX) levels, and more.
- Created a live scoring model that flags when large investors may be quietly buying a stock, using only free public data; backtested it on 60 days of market history.

Safer Temple City — Public Crash-Safety Map *Python · Pandas · GeoPandas · Leaflet* safer-temple-city.vercel.app Oct 2026 – Nov 2026

- Built on my own for my city: matched every crash to one of **450+ intersections** I mapped from OpenStreetMap, reproducing the state's own counts exactly; published in **5 languages** for parents and seniors.
- Wrote **40+ automated data-quality tests**; caught orphan records and a death-count mismatch between two state files, and disproved a planning document's claim that a city road was still a state highway (handed over in 2008).

AI Agent System & Control Center *Python · Claude Agent SDK · FastAPI · SQLite · pytest* 2026 – Present

- Built a multi-agent assistant on the **Claude Agent SDK**: a main agent routes work to 5 specialist sub-agents, plus a FastAPI voice backend.
- Built a dashboard that ranks tasks from my class calendar, job tracker, and trading journal into one "next up"; **100+ automated tests**.

Client Web Development *HTML · CSS · JavaScript · Vercel* maris-arrangements.vercel.app 2025 – Present

- Found, signed, and delivered 8+ paying clients (florists, restaurants, barbers) — handled outreach, requirements, build, and launch.
- Delivered responsive, mobile-first sites deployed on Vercel, and handled post-launch updates for repeat clients.

EDUCATION

California State University, Los Angeles | Blended B.S./M.S. in Computer Science | GPA: 3.4 (CS major: 3.57) | Expected May 2028

Coursework: Quantum Computing, Data Science, Databases (SQL, ER design), Data Structures, Algorithms, Automata Theory, Operating Systems

Honors: Dean's List (2024–25) · First-gen college student · VEX IQ Certified Educator · **Languages:** Spanish, Armenian (elementary)