

AADITYA DESAI

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Software engineering internship, Summer 2027 | Available May 2027 to August 2027

EDUCATION

San Jose State University

Expected May 2028

B.S. Computer Engineering, Minor in Artificial Intelligence | GPA: 3.8 | Dean's Scholar

San Jose, CA

- **Coursework:** Data Structures and Algorithms, Operating Systems, Computer Architecture, Discrete Mathematics

De Anza College

Mar 2026

Certificate of Achievement in C/C++ Programming, with Honors | GPA: 3.8 | Dean's List

Cupertino, CA

EXPERIENCE

Infineon Technologies (in collaboration with De Anza College)

Apr 2026 – Jun 2026

Research Intern and Software Lead, VisionAssist

Cupertino, CA

- Led a 5-person team from concept to working demo on a Raspberry Pi 5 assistive vision system; owned the Python perception service, the on-device neural TTS output path, and the systemd units that run the device headless on power-up.
- Cut per-frame latency to **200 ms** on the Pi 5 CPU by benchmarking model variants and adding frame skipping under load, then layered priority-tiered ranking so the system emitted one highest-priority event per frame instead of every detection.
- Root-caused bad 60 GHz radar distances to the sensor locking onto the strongest reflector rather than the tracked object; reported the failure to Infineon and shipped a calibrated monocular estimator instead.

San Jose State University

Aug 2026 – Present

Teaching Assistant, ENGR 10: Introduction to Engineering

San Jose, CA

- Run two weekly lab sections covering CAD modeling, programming, and circuit design; debug student hardware and code live at the bench, and translate open-ended design specs into steps a first-time builder can execute.

De Anza College

Jan 2025 – Dec 2025

Teaching Assistant and Computer Science Tutor

Cupertino, CA

- Taught C++, x86 assembly (MASM), Python, and data structures; debugged memory-management and algorithmic errors in student code from symptom to root cause rather than handing over fixes.

PROJECTS

Accordion | github.com/a-Fig/accordion

Jun 2026

Python, TypeScript, SvelteKit, Hugging Face Transformers

- Keeps an AI coding agent effective on long tasks by hiding stale context instead of deleting it.
- Won the Sponsor Track at the 2026 UC Berkeley AI Hackathon; the team's open-source repo has passed **200 GitHub stars**.
- Built the three-stage relevance pipeline (keyword scoring, bi-encoder retrieval, cross-encoder rerank) and the live per-actor attribution view; cleared **5 of 6** SlopCodeBench checkpoints at a 100K-token budget versus 2 of 6 for naive compaction.

GazeBoard | github.com/aadityad12/GazeBoard

Apr 2026 – May 2026

Kotlin, Jetpack Compose, LiteRT/TFLite, CameraX, ML Kit, Qualcomm Hexagon NPU

- Lets a person who cannot speak or use their hands talk by looking at tiles on a phone screen.
- Hit **8 ms** inference at 15+ FPS over a 478-point face mesh by deploying Qualcomm's EyeGaze model on the Galaxy S25 Ultra Hexagon NPU via the LiteRT CompiledModel API, at the Qualcomm x Google Edge AI Hackathon.
- Built the pipeline entirely on-device in Kotlin: CameraX capture, ML Kit detection, landmark inference, a custom 4-point affine calibration, dwell selection, and speech output, with no network permissions.

Clear Dispatch | github.com/aadityad12/Clear-Dispatch

May 2026

Python, FastAPI, WebSockets, React 18, TypeScript

- A 911 dispatch console that triages incoming calls and routes the nearest available unit in real time.
- Built a FastAPI and WebSocket backend with a pure TypeScript reducer, making every state transition an event so the client never polls; built at HackDavis 2026.
- Chained a four-stage triage and assignment pipeline with Haversine unit routing, escalating load modes on a sliding 60-second call-rate window, dispatcher-approved before heavy assets move.

TECHNICAL SKILLS

Languages: C++, C, Python, TypeScript, JavaScript, Kotlin, SQL, x86 Assembly (MASM)

Backend and Data: FastAPI, Flask, REST APIs, WebSockets, Server-Sent Events, JSON Schema, SQLite, Firestore

Cloud, Linux and DevOps: AWS, DigitalOcean, GitHub Actions (CI/CD), Linux, Bash, systemd, Git, GDB

Frontend and Mobile: React, Next.js, SvelteKit, Tailwind, Jetpack Compose, CameraX, Gradle, JUnit

AI and Machine Learning: PyTorch, Hugging Face Transformers, NumPy, OpenCV, YOLO, LiteRT/TFLite, Hexagon NPU

AWARDS AND LEADERSHIP

Awards: ICPC 2025 Regionals, top 10 at site (Division 2); UC Berkeley AI Hackathon 2026 Sponsor Track; DA Hacks 3.5, 2nd Place

Leadership and Certifications: Co-Founder and Co-President, Applied Data Analytics Club (2025), grew to 54 members; AWS Cloud Practitioner, AWS AI Practitioner (in progress)