Darren Shen

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EDUCATION

San Jose State University **Graduation: May 2027**
B.S. Computer Engineering, GPA: 3.9/4.0

- **Select Coursework**: Data Structures & Algorithms, Objected Oriented Programming, Circuit Analysis
- **Organizations**: The Software & Computer Engineering Society (Officer)

EXPERIENCE

SJSU College of Engineering **Aug. 2025 – Current**
Undergraduate Research Assistant

- Built backend infrastructure to support Wi-Fi Direct P2P protocols of wireless devices in Spring Boot, gRPC, and MySQL
- Achieved 70% code-reuse for WiFi Aware P2P protocols between iOS & Android by utilizing Kotlin Multiplatform (KMP)
- Reduced manual testing workflows 25% by developing E2E unit tests using JUnit across Android client, transport, servers
- Decreased technical onboarding time by 50% and accelerated new hire ramp-up writing distributed systems documentation

San Jose State University **Jun. 2025 – Aug. 2025**
Software Engineering Intern

- Built an RFID card door authentication system using MongoDB, Express.js, React.js, and Node.js, supporting 100+ users
- Created a real-time card activity monitor with Server-Sent Events (SSEs), improving debugging efficiency by 30%
- Stored card bytes with hashing and salting using the bcrypt library, generating aliases for cards for easy reference
- Deployed the website with Docker, minifying the React code and serving static content with Nginx

SJSU College of Engineering **Aug. 2024 – May 2025**
Undergraduate Research Assistant

- Increased initial app launch speed 10% by caching user preferences to disk using Protocol Buffers with Jetpack DataStore
- Integrated message counters into K-9 Mail to track sent/received bundles, increasing offline testing efficiency by 30%
- Fixed a K-9 Mail login bug with a Kotlin-based retry mechanism, improving successful login rates by 40%

PROJECTS

GraphGuard | *Next.js, FastAPI, LangGraph, OpenAI*

- Built an AI-powered network security platform for global network traffic to detect, investigate, and mitigate cyber attacks
- Produced a streaming pipeline and interactive 3D visualizations in Three.js, mapping network flows as nodes and edges
- Ingested and visualized live NetFlow v5 data as graph models, used CIC-DDoS2019 solely for demo and traffic modeling
- Won the **"Best Customer Choice Project"** track, placing **1st out of 10+** teams at A10 Agentic AI Hackathon competition

QuakeSafe | *React Native, FastAPI, Amazon S3, Supabase (PostgreSQL), Claude, Groq*

- Deployed an AI-powered computer vision application that analyzes earthquake risk from photos of city infrastructure
- Levereaged AWS S3 for cloud image storage in order to support high-volume uploads and reduce risk of data loss
- Developed an image analysis pipeline with Claude to interpret visuals and generate contextual responses

A-IDE | *Next.js, FastAPI, YOLOv8 + Pose, Fish Audio, Groq*

- Developed an AI-driven computer vision system that detects potential drowning incidents through real-time camera feeds
- Implemented YOLOv8 + Pose to analyze swimmer motion patterns at regular intervals and identify signs of distress
- Utilized Groq for low-latency LLM inference and Fish Audio for voice AI alerts, reducing lifeguard reponse times

Syll.ai | *Next.js, FastAPI, Tailwind, Vercel, Supabase (PostgreSQL)*

- Created an AI platform to process PDFs, summarizes course info, and generate personalized course logistics and grades
- Developed a real-time Python pipeline with GeminiAPI to extract information from unstructured PDFs
- Implemented user authentication with NextAuth and designed a PostgreSQL schema to persist course data across sessions

SKILLS

Languages: Java, JavaScript, TypeScript, Python, C, Kotlin, SQL
Frameworks: React.js, Next.js, FastAPI, Spring Boot, Tailwind CSS, gRPC, Android SDK, Node.js, Express.js
Technologies: Supabase (PostgreSQL), Amazon S3, Vercel, GitHub, Docker, MongoDB, Postman, OpenCV, Pytorch