

SUE SUE

suesue.dev | 29suesue@gmail.com | linkedin.com/in/sue-sue | github.com/suesuee

EDUCATION

Brown University <i>Master's degree in Computer Science</i>	Providence, RI Aug 2026 - June 2028
California Polytechnic State University, San Luis Obispo <i>Bachelor of Science in Computer Science (GPA: 3.95)</i>	San Luis Obispo, CA Sept 2024 - Jun. 2026

SOFTWARE ENGINEERING EXPERIENCE

Software Engineering Intern (Co op) <i>Calling All Kids Mobile App</i>	Sept 2025 - Present San Luis Obispo, CA
- Architecting full-stack analytics platform with Node.js/Express and PostgreSQL processing 10,000+ children's voice data; engineering NLP sentiment analysis and prosody extraction (pitch, latency, pauses) for behavioral insights. - Building personality profiling engine implementing Rothbart temperament model with weighted aggregation algorithms combining quantitative metrics and qualitative transcript analysis to produce parent-facing recommendations. - Developing Flutter Web dashboard and Jest/Mocha testing suite (80%+ coverage); designing data pipelines with speaker identification, multi-child attribution logic, and COPPA-compliant data handling for production deployment.	
Software Engineering Intern <i>Fiducia AI</i>	Jun 2025 – Aug 2025 San Luis Obispo, CA
- Built interactive activations used by 50+ users to retrieve real-time athlete stats and bios from scanned images by integrating IBM's SpeedShotX camera API; applied prompt engineering to generate accurate AI responses. - Enhanced accessibility of the camera activation system using React and JavaScript by implementing screen reader support, dynamic alt text, read-aloud functionality, and haptic feedback for all interactive elements on the front end. - Developed JUnit 5 unit tests in Java for Spring Boot API endpoints and accessibility features, covered standard and edge cases using mocked service and repository layers.	

PROJECTS

Referral Program and Engagement Platform, Paso Robles Food Co op <i>Hack4Impact Cal Poly (Software Developer 2024 to 2025, Tech Lead 2025 to Present)</i>	2024 - Present San Luis Obispo, CA
- Built referral platform using Next.js, Supabase, and Prisma ORM for secure authentication and referral tracking. - Developed React and TypeScript components, automated emails, and Docker based deployment workflows. - As Tech Lead, directing the expansion into a member engagement system; leading requirements gathering and architecture planning with Co op leadership for an event engagement page; running sprints, mentoring developers, coordinating with designers, co-Tech lead, Product Manager, and overseeing early design workflows.	
Roommate Chores Tracker	
- Built RESTful API using FastAPI and SQLAlchemy with relational schema, CRUD operations, and Swagger UI docs. - Generated 1M synthetic users to test performance, optimized queries with indexes, deployed locally with Docker.	

RESEARCH EXPERIENCE

Cal Poly Undergraduate Research Assistant <i>Approximating Maximum Weighted Independent Set (MWIS) Empirically</i>	Jun 2025 – Present San Luis Obispo, CA
- Implemented and analyzed three approximation algorithms (PQ, NNC, and Naive) for the MWIS problem in scale-free networks, validating theoretical bounds and performance guarantees through technical literature review and empirical analysis. - Built automated pipeline analyzing 10,000+ graph instances, discovering and correcting critical bugs that invalidated prior results. - Established algorithm selection guidelines showing Nearest Neighbor Chain achieves 2-5x speedup with 95-99% solution quality compared to Priority Queue, informing practical trade-offs for large-scale applications. - Currently working toward formal proof that half-optimality guarantees extend from Erdős-Rényi to Barabási-Albert graphs through literature review of probabilistic analysis techniques, preferential attachment theory, and random graph concentration bounds.	
Cal Poly Undergraduate Research Assistant <i>CSU AI Educational Innovations Challenge Winner — AI-Driven Agentic Framework for Engineering Lab Learning</i>	Aug 2025 – Present San Luis Obispo, CA
- Developing an open-source agentic AI framework that uses LLM-driven workflows to provide course-specific lab support. - Conducting literature reviews, faculty interviews, student surveys, and thematic analysis to identify key challenges students and instructors face in lab environments. - Designing the LLM-based question-answering module to automate configuration tasks and deliver tailored support, with deployment planned for 500+ Cal Poly students by Spring 2026 and future expansion across the CSU system-wide expansion.	

TECHNICAL SKILLS

Languages: Python, Java, C++ , C, JavaScript, TypeScript, SQL, HTML, CSS
Frameworks and Libraries: React, Next.js, FastAPI, Flask, Express, PyTorch, NetworkX, Matplotlib, TensorFlow, scikit-learn, Pandas
Databases and Tools: PostgreSQL, MySQL, MongoDB, Prisma, Git, Docker, AWS, Supabase, Jupyter