

# Brian Ngo

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## EDUCATION

### California State University Fullerton

2023 - 2026

*Bachelor of Science in Computer Science*

- **Coursework:** Artificial Intelligence, Algorithm Engineering, Software Engineering, Compilers and Languages, OS, Database and Applications, Multivariable Calculus, Linear Algebra and Diff Equations, Statistics, Machine Learning, Edge AI

## PROJECTS

### Custom Digital Smartwatch

Feb 2025 - May 2025

*Theta Tau*

*Fullerton, CA*

- Led an 18-person team to design, build, and deploy a fully functional smartwatch using Raspberry Pi Zero, delivering on a strict 10-week timeline.
- Organized work into structured phases (research, production, optimization, deployment) and ran weekly/biweekly Scrum meetings to set goals, resolve blockers, and maintain steady progress.
- Solved critical hardware and software issues (touchscreen drivers, Raspberry Pi OS) using Bash shell scripting, demonstrating strong technical leadership and problem-solving under pressure.
- Developed custom smartwatch applications in Python and Pygame, including a Flappy Bird-style game, a stopwatch/timer, and a random number generator.
- Managed version control with GitHub (branching, merging, pull requests) to coordinate team contributions and ensure seamless system integration.

### Manufacturing ERP Platform

May 2025 - Aug 2025

*Self-Employed*

*San Jose, CA*

- Currently licensing to varying manufacturing companies in the Bay Area.
- Designed and implemented a scalable full-stack ERP platform using Next.js/React/TypeScript, which achieved 83% code reduction through modular architecture and component reusability across order management, production, and inventory systems.
- Engineering a high-performance database layer with PostgreSQL/Supabase, which eliminated N+1 queries through batch fetching and implemented Map-based lookup tables to enhance data retrieval efficiency.
- Delivering an end-to-end user experience with responsive design, real-time search algorithms, and automated workflow orchestration, which drove operational efficiency across the manufacturing pipeline.

## EXPERIENCE

### Theta Tau, Phi Epsilon Chapter

Feb 2025 - May 2025

*PNM President*

*Fullerton, CA*

- Guided peers and answered questions to empower team success through consistent, approachable leadership, resulting in improved team collaboration
- Ensured transparent communication and alignment on goals by acting as the primary liaison between the team and organizational leadership, leading to better team cohesion
- Collaborated with board members by sharing responsibilities and delegating key initiatives, ensuring cohesive execution and collective success, which enhanced project outcomes

### FullyHacks (CSUF Hackathon)

Apr 2025

*Hackathon Participant*

*Fullerton, CA*

- Completed a 24-hour hackathon, balancing independent project development with active workshop participation, and gained hands-on experience with AWS, resulting in enhanced proficiency in cloud services
- Focused on rapid learning and technical skill-building under time constraints, which improved my ability to apply new knowledge quickly in practical scenarios
- Developed a real-time gesture recognition system using OpenCV and MediaPipe to map dynamic hand gestures to keyboard or mouse inputs.

### CA Bakehouse

Apr 2021 - Jul 2023

*Shift Lead / Sales Clerk*

*San Jose, CA*

- Served as the liaison between the team and owners, facilitating clear communication and fostering strong relationships to enhance workflow efficiency
- Executed 21,000+ transactions precisely, demonstrating strong attention to detail and effective workflow coordination

## TECHNICAL SKILLS

- **Languages:** Python, TypeScript, JavaScript, Java, C++, SQL
- **ML/Data Science:** PyTorch, Scikit-Learn, Pandas, NumPy, Matplotlib, OpenCV, MediaPipe
- **Full-Stack & Cloud:** Node.js, PostgreSQL, Supabase, RESTful APIs, React 18, Next.js 14
- **Tools & Platforms:** Git, Docker, AWS, Vercel, Jira, Scrum, Agile, Jupyter Notebook, Figma, Tailwind CSS, Microsoft Excel, Microsoft Office Suites, Slack, Anthropic/Claude CLI, OpenAI