Brian Ngo

ngobrian17@gmail.com | LinkedIn | Github | Portfolio

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 | Engineering Society *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.

Manufactering 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

Amazon Web Services (DxHub) **Jul 2025 - Aug 2025**
AWS/AI Summer Camp *San Luis Obispo, CA*
- Developed and deployed an end-to-end AI platform using Python, Streamlit, and Plotly, delivering real-time procurement analytics via a responsive, full-stack web interface.
- Implemented a TF-IDF + cosine similarity engine (Scikit-Learn) to vectorize and compare over 300K procurement records, boosting supplier matching accuracy with >0.4 similarity thresholds.
- Addressed critical supplier diversity challenges and solved procurement inefficiency for local small businesses around Cal Poly SLO by developing an AI solution that automates the supplier discovery process, previously reliant on manual research, to help increase their small business procurement participation towards their desired goal.
- Architected a scalable serverless pipeline using AWS S3, Lambda, and Bedrock Claude 3.0 with Retrieval-Augmented Generation (RAG) to power a context-aware procurement recommendation chatbot.

Theta Tau, Phi Epsilon Chapter | Engineering Society **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

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