Brendan Nellis

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EDUCATION

The University of Texas at San Antonio San Antonio, TX
B.S. in Electrical Engineering concentration in Computer Engineering, GPA: 3.73 Dec 2025

- Relevant Courses: C++ & Data Structures, Systems Programming, Computer Programming for Engineers, Data Communication & Networks, Artificial Intelligence, Machine Learning, Linear Algebra

TECHNICAL SKILLS

Languages: Python, Java, JavaScript, C, C++, SQL (Postgres), HTML, CSS, MATLAB
Frameworks & Libraries: Spring Boot, Node.js, Wordpress, OpenCV, PyTorch, Keras, PyQt, NumPy, Pandas, Matplotlib
Developer Tools: Git, Docker, GitHub, Linux, Bash, VS Code, Fusion 360
Cloud & Automation: AWS, Microsoft Azure, Azure Power Automate

PROJECTS

please note.. | *Personal Full-Stack Software Project* Jan 2026 – Present

- Designed and developed a note-taking and knowledge management application inspired by version-controlled workflows, focusing on usability, organization, and long-term data persistence
- Implemented a Spring Boot backend with PostgreSQL for structured data storage alongside a web frontend built with HTML, CSS, and JavaScript to create, view, and manage notes
- Built clean API boundaries between frontend and backend, applying modular design principles and Git version control to support iterative development and future feature expansion

palletPortal | *Team Lead & Software Engineer Lead* Jan 2025 – Dec 2025

- Architected autonomous pallet scanning system that increased throughput from 1 to 9+ barcode per pass (900% improvement), reducing manual scanning time by 75%
- Refactored front-end GUI using PyQt from monolithic embedded design into modular class-based architecture, reducing code duplication by 10% and improving maintenance efficiency for feature iteration
- Optimized application state management using flag-based flow control, extending continuous runtime from 1 to 4+ cycles (400% improvement), enabling sustained 60+ minute operational sessions during stress testing
- Built unified hardware abstraction layer for heterogeneous sensor inputs (2 cameras + 2 ultrasonic sensors), enabling real-time multi-stream processing at 30+ fps with <50ms latency

EXPERIENCE

The University of Texas at San Antonio San Antonio, TX
Data Visualization Intern Jan 2023 – Dec 2025

- Identified and corrected 5% of reporting errors in third-party contractor documentation through validation, review, and data quality control processes prior to submission to the Texas Department of Licensing and Regulation
- Led documentation modernization efforts by digitizing records and automating document workflows using Microsoft Power Automate, improving accessibility and version control across cross-functional operations teams

The University of Texas at San Antonio San Antonio, TX
Undergraduate Researcher July 2024 – May 2025

- Built autonomous driving evaluation system using CARLA simulator with automated computer vision analysis of 5 traffic compliance rules (turn signals, stop position, braking, lane discipline), enabling quantitative driver behavior assessment
- Developed traffic optimization experiments using reinforcement learning by assisting with simulation execution, data generation, and performance evaluation in mixed autonomy traffic scenarios

DHL Supply Chain San Antonio, TX
Logistics Operations Coordinator May 2021 – July 2022

- Designed and deployed FILO inventory management system prioritizing older stock movement, optimizing $100M+ supply chain flow and reducing inventory aging costs by approximately 30%
- Coordinated inbound logistics for 500k+ ductless mini split units by working with brokers and teams in Houston and Los Angeles to ensure timely container processing
- Optimized daily operations by restructuring staffing model from 8 rotating workers to dedicated 4 person cross-trained team, reducing operational variance by 75%, improving task completion rate from 65% to 95%, and enhancing team accountability