Noah Bean

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Summary

Computer engineer with hands-on experience in embedded systems, signal processing, and data analysis.

Education

Oregon State University Corvallis, OR

Bachelor of Science in Electrical and Computer Engineering *Sep 2020 – Dec 2025*

- GPA: 3.82/4.0
- Relevant Coursework: Computer Architecture, Operating Systems, Microcontroller System Design, Digital Signal Processing
- Activities: Tau Beta Pi, IEEE, Association for Computing Machinery (ACM)

Technical Skills

- **Embedded Systems and Hardware:** C, C++, Linux, Bash, PCB Design, Xilinx Vivado, SystemVerilog
- **Machine Learning and Data Science:** TensorFlow, PyTorch, Data Analysis, Statistics, SQL, Python, Matlab

Experience

Systems Engineering Co-op Jun 2025 -– Dec 2025

Collins Aerospace *Wilsonville, OR*

- Designed and implemented a data pipeline using Python and SQL for aerospace hardware testing, transforming raw test data into actionable insight.

Hardware Failure Analysis Engineering Intern Apr 2024 – Sep 2024

Intel Corporation *Hillsboro, OR*

- Developed a binary classification convolutional neural network in TensorFlow, achieving 96% precision and increasing defect detection throughput by 20%.
- Created a multimodal anomaly detection autoencoder in PyTorch, improving defect detection reliability by 15%.
- Diagnosed and resolved 11+ hardware failure cases using IR cameras, oscilloscopes, soldering, and Keyence microscopes.
- Built a RAG Chatbot for predictive maintenance using LangChain, ChromaDB, and a fine-tuned LLaMA 3.1 model.
- Optimized CPU/GPU utilization by 10% through workload performance tests and developed a Python scan chain script for streamlined diagnostics.
- Led intern cohort, organizing 6+ team-building events to boost collaboration.

Learning Assistant Sep 2020 – Jun 2021

Oregon State University *Corvallis, OR*

- Tutored 150+ students in Derivative and Integral Calculus (MTH 251, MTH 252), providing individualized feedback.
- Graded assignments for over 300+ students across multiple classes, ensuring consistency and adherence to grading standards.
- Supported students in calculus, linear algebra, probability, and statistics through one-on-one and group tutoring sessions.

Projects

RoboRacer Autonomous Vehicle Sep 2024 -– Jun 2025

Embedded Systems, Digital Signal Processing, RTOS

- Architected embedded system C firmware on STM32.
- Developed Signal Processing for IR, IMU, LIDAR, and Bluetooth.
- Integrated FreeRTOS for real-time scheduling and task management.
- Led system architecture and managed hardware/software integration.

SystemVerilog Matrix Multiplication Engine Sep 2024 – Dec 2024

SystemVerilog, Xillinx Vivado

- Designed a systolic array in SystemVerilog for matrix multiplication.
- Performed simulation, timing analysis, and testbench verification in Vivado.

2-Channel Power Supply PCB Design Jan 2024 – March 2024

PCB Design, Power Electronics

- Designed and developed a 2-channel power supply PCB with adjustable voltage (2-15V) and current (0-1.5A) outputs.
- Used Kicad for schematic capture and multi-layer PCB layout.