Noah Bean

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Professional Profile

Computer Engineer with 1+ year of experience at Intel and Collins Aerospace in hardware verification, embedded systems, and systems engineering. Skilled in C, Verilog, and computer architecture, focused on optimizing computing platforms from silicon to software.

Education

Oregon State University – Corvallis, OR *Dec 2025*
B.S. Electrical and Computer Engineering GPA: 3.83/4.0
Relevant Coursework: Computer Architecture, Operating Systems, VLSI, Microcontroller System Design, Digital Signal Processing, Computer Networking
Activities: Tau Beta Pi, IEEE, ACM

Technical Skills

Languages & Software: C, C++, Python, Verilog, MATLAB, Bash/Shell, Assembly (x86), Linux, Git, Docker, Make/CMake, GDB
Hardware & Tools: FPGA, STM32, KiCad, Vivado, Quartus, Cadence, Synopsys, ModelSim
Core Concepts: Computer Architecture, Digital Logic, Embedded Systems, Memory Hierarchy, Bus Protocols (AXI, SPI, I2C), Multithreading, Signal Processing, Hardware/Software Co-Design

Experience

Systems Engineering Co-op – Collins Aerospace, Wilsonville, OR Summer/Fall 2025

- Evaluated RF and infrared avionics system modifications through lab, field, and flight testing.
- Built Python/MATLAB tools for data collection and visualization, improving test efficiency.
- Applied real-time signal and image processing and provided recommendations for RF, FPGA, and embedded hardware optimization.

Electrical Engineering Intern – Intel Corporation, Hillsboro, OR Apr 2024 – Sep 2024

- Diagnosed 11+ hardware failures (servers, GPUs, memory) with IR cameras and oscilloscopes, reducing downtime by 10%.
- Developed a PyTorch autoencoder for PCB solder joint anomaly detection (↑20% reliability) and optimized CPU/GPU workloads (↑10% utilization).

Projects

RISC-V CPU Design and FPGA Implementation – Verilog, Vivado Nov 2024

- Designed a single-cycle RV32I CPU with ALU, memory interfaces, FSM control, and UART/GPIO peripherals.
- Validated instruction execution through simulation and hardware testing with synthesis and testbench debugging.

Multithreaded Kernel Development – C, x86 Assembly Jul 2025

- Built a 32-bit OS kernel with bootloader, memory management, interrupts, scheduling, and FAT16 file system.
- Added ELF loading, system calls, and privilege separation.

IoT PCB Design and Manufacturing – KiCad, ESP32 Sep 2025

- Designed a four-layer IoT PCB with sensors, SD storage, OLED, USB-UART bridge, and power circuits.
- Routed high-speed signals, optimized power planes, performed ERC/DRC checks, and validated with lab instruments.