Evan Stenger

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Education

M.S. **University of New Hampshire**, Electrical and Computer Engineering — Aug. 2023 – Present

- GPA: 3.89
- **Relevant course work:** Digital Signal Processing, Wireless Communication Systems, Ubiquitous Computing, Biosensors, Computer Architectural Security.
- **Study Focus:** Computer architecture, digital systems development and implementations.

B.S. **University of New Hampshire**, Electrical Engineering — Jan. 2020 – May 2023

- GPA: 3.51
- **Relevant course work:** Application of Integrated Circuits, Introduction to VLSI, Computer Organization, Introduction to Digital Systems, Signals and Systems I & II, Electromagnetic Fields and Waves, Statistics for Engineers and Scientists.
- **Study Focus:** Electrical fundamentals, analog control systems, and filters.

A.S. **New Hampshire Technical Institute**, General Studies — Sep. 2017 – May 2019

- GPA: 3.30
- **Relevant course work:** Introduction to Electrical Engineering.
- **Study Focus:** Engineering principles.

Experience

UNH - InterOperability Laboratory, FPGA RTL Engineer — Durham, NH, July 2023 – Present

- Architect of BitPhyer 2 Core and BitPhyer Stream Core, and Lead FPGA Engineer of BitPhyer+ Platforms, leading the design and implementation of FPGA-based architectures for IEEE 802.3 10/100/1000 Ethernet, SFP, SFP+ PHY and MAC compliance testing.
- Spearheaded system-level architecture decisions, improving performance, resource utilization, and power efficiency over previous generations of tools.
- Collaborated with hardware and software teams to integrate and validate FPGA solutions.
- Developed verification strategies and implemented testbenches to ensure design robustness.
- Contributed to IEEE P1952 Resiliant PNT specification by providing feedback on requirement testability and contributed to program's Conformity Assessment Steering Committee with test plan development work.
- Served as the company's representative to the UCIe Form Factor / Compliance Work Group and contributed to company's internal interoperability and compliance testing plans for future UCIe specification testing.

United States Marine Corps, Detachment Training Non-Commissioned Officer — Yuma, AZ, Dec. 2016 – Sep. 2017

- Coordinated required annual and biannual training events to maintain personnel readiness levels.
- Managed Detachment SharePoint network and developed standardized personnel training and administration system.

United States Marine Corps, Aviation Radar Technician

Yuma, AZ
Sep. 2012 – Sep. 2017

- Supervised operation of AN/TPS-63B and AN/TPS-59A(V)3 ground-based air surveillance radar systems in support of the Tactical Air Operations Center.
- Led teams in corrective and preventative maintenance on radar systems including troubleshooting, replacing, and aligning electric and mechanical components.
- Managed storage, organization, and deployment of electronic test equipment as well as maintained test equipment calibration schedule for two teams.
- Designed and implemented an expedited field repair on Northrup Grumman's AN/TPS-80 prototype after a critical failure during important field tests.

Projects

HDL-AI, Thesis Work (Ongoing)

https://github.com/Maniir/hdl-ai

- Developed an LLM-based framework that uses automatic Verilator simulation feedback to enhance Verilog-generation, improving the performance of generic model LLM AI in prompt-to-hdl tasks.
- Tools Used: Python, Verilator, Transformers, OpenAI API, Pytorch

Core Competencies

Languages: Verilog, Python, C++, MATLAB

Development Tools & Platforms: Vivado, AMD/Xilinx FPGAs, Opal Kelly FrontPanel SDK, Git, Verilator

Hardware Skills: PCB Design & Development, Soldering

Debugging & Testing: Device troubleshooting using Oscilloscopes, Multimeters, and Spectrum Analyzers

Protocols & Compliance Standards: IEEE 802.3 Ethernet, IEEE P1952 Resilient PNT, UCIe Form Factor / Compliance