

Gustaf Swansen

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Work Experience

Hardware Architect | Bolt Graphics | Denver, CO

June 2022 – Present

Bolt Graphics is a startup designing a GPU. My responsibilities include the following:

- Managing tasking, breaking down work, and reviewing code for a team of engineers.
- Evaluating different designs for timing, area, and power.
- Creating benchmarks which helped secure two rounds of funding.
- Developing ray-tracing accelerator IP.
- Architecting from 0 to POC, a hardware accelerator for physics simulation.
- Conducting technical interviews for hiring.
- Developing the first driver and managing tasking for all subsequent driver versions.
- Verifying functionality in behavioral simulation and FPGA implementation.
- Operating booths at conferences and communicating at multiple levels of technical detail.
- Designing and implementing VLSI components at a logic level and architecture level.
- Bringing up new FPGAs in person and remote on AWS.
- Fixing timing violations and bugs.

FPGA Engineer | Boeing | Albuquerque, NM

June 2020 – May 2022

Boeing Laser & Electro-Optical Systems (LEOS) is a research and development (IRAD) office that develops cutting-edge laser weapon systems. My responsibilities included the following:

- Developing and implementing image-processing and object-tracking algorithms and on real-time FPGA systems.
- Maintaining legacy code as well as updating legacy code to operate on new hardware.
- Developing new IP and Simulating test environments for that new IP.
- Developed IP for FPGA to FPGA communication of QSFP fiber.
- Training and advising new employees.

Internship | Invenshure | Minneapolis, MN

May – August & December 2018

Invenshure is a technology incubator which brings early-stage technology to market. I worked for two of their portfolio companies doing software development.

Education

MS | Purdue University | West Lafayette, IN

January 2022 – May 2025

Electrical & Computer Engineering with focus in VLSI

Completed part time while working full time for Boeing and Bolt Graphics

Overall GPA 3.6 / 4.0

Relevant course work

- MOS VLSI Design
- Integrated Circuit / MEMs Fabrication
- Electronic Packaging and Heterogeneous Integration

BS | Purdue University | West Lafayette, IN

August 2016 – May 2020

Electrical & Computer Engineering

Relevant Skills

System Verilog, C, C++, Python, Git, VHDL, Xilinx/Vivado, Agile Management, Docker, Cmake, Cadence Virtuoso, Matlab, Simulink, Microcontroller Programming, Microsoft Office, Google Drive, UVM