Ethan Sorensen

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Education

Brigham Young University, Provo UT **Expected April 2026**

BS in electrical engineering *GPA: 3.98*

Coursework: FPGAs, Computer Architecture, IoT systems

Technical Skills

Languages: C/C++, Python, VDHL, SystemVerilog, VBA
Software & Tools: Linux/Windows systems, PADS Designer & Library Tools, Microsoft Office, Vivado
Skills: English / Spanish, adept communication and documentation skills

Experience

The Aerospace Corporation **May 2023 – August 2023**

DCID Technical Intern *El Segundo, CA*

- Created a method of detecting individual Starlink satellites from collected data using RANSAC regression as a part of the development of a non-cooperative PNT solution.
- Created a pipeline for GPS-SBF receivers that allows for certain messages and observations to be filtered and repacked into modules, assisting in the construction of a resilient PNT solution alternative to GPS.

The Aerospace Corporation **May 2022 – May 2023**

xLab Technical Intern *El Segundo, CA*

- Worked with engineers to redesign and improve the xLab PADS library database; managed and created workflows for the import and creation of PADS Designer parts, as well as performing critical library repairs to enhance project development across xLab.
- Assisted in the schematic development and VHDL implementation of standardized GSE equipment to be used in future projects.
- Worked with engineers to repair, inspect, and assemble various engineering boards as a solder technician.

The Church of Jesus Christ of Latter Day Saints **July 2019 – July 2021**

Full Time Representative *Gaborone, Botswana*

- Led volunteer activities of up to 10 international volunteers at a time in various locations, working over 600 volunteer hours per week.
- Designed and implemented a Google Scripts based program to provide statistical analysis and records for an organization of over 250 volunteers.
- Served as the direct interface between The Church of Jesus Christ and the Botswana government, working to acquire and maintain visas for up to 30 persons at once.

Projects & Accolades

Remote Access Terrarium Manager | *Personal Project using Python and Rasbperry Pi (Git)* **July - August 2023**

- Designed and built a remote controlled payload that manages the temperature, humidity, and light levels of two terrariums hosting frogs.
- Created a user interface using Python's Tkinter that allows for command and configurations to be sent remotely to a server hosted on Raspberry Pi.

Raspberry Pi 'Ring' Doorbell | *Computer Systems Project (Git)* **January - April 2023**

- Created a product similar to Amazon's 'Ring' doorbell, capable of taking pictures when triggered and sending them to a storage server.
- Implemented using C code on a Raspberry Pi Zero in a custom 3D printed casing.

Prototype 1U CubeSat | *Aerospace's Robert H Herndon Science Comp.* **May 2018 - May 2019**

- Team won 1st place in competition for our design of a prototype 1U CubeSat bus with telemetry, power, attitude control, and payload hosting.
- Designed and implemented from scratch using Arduinos and C++ code, custom PCBs, and hand crafted aluminum framing.

Certifications

IPC JSTD-001: Soldering and Inspection, received July 2022
IPC 620D: Wires and Harnessing, received July 2023