

Samuel Witte

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EDUCATION

UNIVERSITY OF IOWA, IOWA CITY, IA
BSE Electrical Engineering

Aug 2020 - Present

Computer Track(EEc) Focus Area of Computer Hardware Anticipated Graduation Dec. 2024

EXPERIENCE

UNDERGRADUATE COMPUTER ENGINEER, UNIVERSITY OF IOWA

Iowa City, IA

Feb 2023 - Present

- Worked in association and collaboration with NASA and University research groups on numerous projects.
- Developed and currently maintaining ground support computer, utilizing LVDS (Low Voltage Differential Signal) and the CCSDS protocol for data downlink from sounding rockets and associated data collection systems.
- Utilized MATLAB and Raspberry Pi to display ADC outputs sent via SPI.
- Developed and currently maintaining GUI written in Python which interfaces with various lab equipment via SCPI and PyVISA.
- Wrote verilog modules and testbenches for various projects (see some below).

TEACHING ASSISTANT FOR INTRO TO DIGITAL DESIGN UNIVERSITY OF IOWA

Iowa City, IA

August 2023 - Present

- Led biweekly lab section, held office hours and provided assistance to students, graded assignments/exams

ELECTRICAL DESIGN INTERN, SSC ENGINEERING, INC.

Chesterfield, MO

Dec 2021 - Aug 2022

- Programmed and maintained internally used automation scripts written in Python and PowerShell to save over 40 hours monthly; deployed across systems company-wide using external script deployment software
- Designed electrical layouts for commercial buildings with Revit and AutoCAD to address daily client specifications
- Enabled teams of up to 4 to complete individualized work, followed by whole-team validation to ensure quality and execution of our services

PROJECTS

FPGA Projects

Projects to practice and improve skills, including basic ALUs and signal generator

Lab Equipment GUI

UI that interfaces with lab equipment such as power supplies and function generators via PyVISA in order to control and test flight hardware.

HPR Flight Computer

Records sensor data in-flight for analysis post-flight using an RP2040 micro-controller. Developed and assembled custom PCB. Practiced BOM management, version control, PCB layout and design, and collaborating with others.

LEADERSHIP

President - AIAA University of Iowa Chapter (High Powered Rocketry)

May 2022 - Present

- Organize, coordinate, and prepare material for weekly meetings, events, and competitions
- Flight avionics engineer/lead and overall electronics team lead
- Write grant proposals, ongoing design reports, and receive grant funding

Executive Assistant - AIAA University of Iowa Chapter (High Powered Rocketry)

Aug 2021 - May 2022

- Project lead for competition rocket, including design and assembly; assisted with logistics and meeting plans

SKILLS

Python Verilog CUDA C++ Java Altium Designer Fusion 360 Git/VCS
Powershell SMD/TH Soldering Revit & AutoCAD Excel/Microsoft Suite