Samuel Witte

sam@samwitte.com | (314) 608-1334 | samwitte.com | 222 Wynnbrooke Circle Dr., Fenton, MO, 63026

EDUCATION

University of Iowa, Iowa City, IA
BSE Electrical Engineering — Aug 2020 - Dec 2024 (anticipated)

Computer Track(EEc) Focus Area of Computer Hardware Mathematics Minor

EXPERIENCE

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

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 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.
- Programmed Python GUI which interfaces with various lab equipment via SCPI and PyVISA.
- Prototyped deployable portable magnetic field alert system for placement around sensitive equipment and to test tools before entering sensitive work area.
- 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

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