Samuel Conkle

Driven & Adaptable Aerospace Engineer and US Citizen

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EXPERIENCE

Empirical Systems Aerospace, San Luis Obispo, CA — *Aerospace Engineer / Flight Test Engineer*

October 2021 - March 2023

- Created an advanced Detection and Avoidance (DAA) software prototype based on TCAS math for future Urban Air Mobility (UAM) concepts
- Integrated and tested AI-based vision tracking algorithms like GOTURN and KCF onboard Group 1 Unmanned Aircraft System (UAS)
- Assisted in vehicle checkout and vehicle flight tests for single vehicle and swarming missions. Developed and integrated NVIDIA Flight computers with vision functionality for two separate internal UAS R&D programs while serving as the Liaison between the software team and Flight test team
- Started CI/CD & Codesigning process for NASA's OpenVSP aero modeling program
- Developed and streamed video from an UAS-side radio to multiple Ground Control Station (GCS) programs like Mission Planner, QGroundControl, Autonodyne, and Kinesis (w/ gimbal remote control)
- Generated multiple Small Business Innovation Research (SBIR) proposals to advance current company technologies, for some of which I was designated Principal Investigator (PI)

EDUCATION

Purdue University, West Lafayette, IN — *Aeronautical and Astronautical Engineering*

August 2017 - May 2021

Specialization: Dynamics & Control

PROJECTS

Purdue Orbital, West Lafayette, IN — *Avionics Design Lead*

- Lead the Avionics subteam of 8 team members to develop software and hardware for a Rockoon (Rocket and Balloon) system with the long term goal of launching a cubesat into orbit.
- Also responsible for understanding and documenting how other teams integrate into Avionics' system. Used Eagle for PCB design and Python for software programming

SKILLS

Programming Languages: C++, Bash, Python, Matlab/Simulink

Software Programs: Microsoft Office Suite, QGroundControl, Mission Planner, Autodesk Inventor, CATIA, SOLIDWORKS, Blender, XFLR, GMAT

Academic Proficiencies: Aerodynamics, Control systems, orbital mechanics, structures, systems engineering, performance analysis

AWARDS

Purdue Presidential Scholarship Recipient (2017-2021)

Published Aerospace History Research Article in Purdue's *Think* magazine (2019)

Eagle Scout - Boy Scouts of America (2017)

3 year Resident Assistant Recognition Award (2021)

LANGUAGES

English, Spanish (beginner)