V SADYGOV

Houston, TX · *v@vsadygv.com* · *vsadygv.com*

EDUCATION

COMPUTER SCIENCE B.S. – *University of Houston*

WORK EXPERIENCE

Embedded System Software Engineer

Odyssey Space Research — May 2023 – Jul 2023

- Created updated-cross platform versions of legacy window software on linux.
- Aided in the ISS payload softwares.

Software Engineer

KBR - LZTech, Houston TX — Jan 2023 – May 2023

- Helped test and fix Ground Station softwares to assist in future KBR missions.

Software and Electrical Engineer — Mar 2022 – Oct 2022

Cosine Additive, Houston, TX

- Developed ~1,300 unit tests for a 3D-printing Solidworks slicer plugin using MSTest, decreasing reported crashes by 90%.
- Rewrote and optimized 4 C++ libraries for C#, enabling algorithmic 3D visualization and GPU integration via OpenGL.
- Performance tested application with seed-based randomly generated inputs and automated output validation via Jenkins.
- Ensured quality of 3D-printer relay board PCB by performing continuity testing and probing.

IT / Full-Stack Development Intern — Jun 2021 – Sep 2021

Harris County Sheriff's Office, Houston, TX

- Diagnosed technical issues and delivered on-site hardware-based IT solutions to company employees.
- Created full-stack projects in Javascript and C#, capable of integration with MSSQL databases.
- Optimized the default method of primary key assignment by creating a new class of unique identifiers in MSSQL.

PERSONAL PROJECTS

NASA HUNCH Space Washing Machine — Aug 2019 – May 2020

Raspberry Pi · C++ · NI Multisim

- Extensively developed, documented, and simulated pre-build prototype, resulting in implementation in the NASA ISS.
- Leveraged C++ to program a Raspberry Pi with dedicated system states for safety and functionality.

Level 1 Rocket — Dec 2020

FreeCAD · OpenRocket · Rocket Design · Epoxy

- Designed, 3D-printed, painted, and launched a rocket with regard to certain stability margins and constraints.
- Successfully launched rocket in Jan 2021, and merited achievement of Level 1 Rocket certification.

Dactyl Manuform - Ergonomic Split Mechanical Keyboard — Mar 2021

Soldering · Additive Manufacturing · QMK

- 3D-printed key-switch enclosure using traditional Fused Deposition Modeling (FDM).
- Designed and printed custom keycaps with regard to key profile and keypress feel.
- Handwired each half to individual Arduino Pro Micros, utilizing PCB-less design and enabling board ergonomics.
- Programmed/flashed the ATmega32u4 with custom keymap layout and QMK open-source firmware.

LEADERSHIP AND ACTIVITIES

AIAA-UH Web Master — Apr 2020 – June 2022

- Updated and redesigned the website for the University of Houston chapter of the American Institution of aeronautics and Astronautics

Avionics Subteam Leader — Jan 2021 – Dec 2021

Space City Rocketry - University of Houston Rocket Club

- Integrated data collection hardware and processed data through a multiplexer for in-flight performance analysis.
- Maximized efficiency by restructuring subteam into parts by avionic component purpose.
- Lead in two successful launches of the team rocket up to 10,000 ft.
- Assisted in matters involving 4 teams and ensuring smooth operations and communications to better lead the project.

Chief Engineer — Aug 2021 – Dec 2021

University of Houston Hobby Rocketry

- Mentor a team of 35+ members through the process of rocket-building with regard to safety and engineering standards.

SKILLS

Programming Languages/Platforms: C/C++, C#, Java, Python, MicroPython, Assembly, GLSL, Bash Scripting
Tools: Linux/Unix, AutoCAD, LibreCAD, EagleCAD, KiCAD, Multisim, QMK, Vim, Arduino, Git, Jenkins, Diptrace
Skillsets: Soldering (THM and SMD), 3D modeling, Simulating (electrical), Unit Testing, Solidworks.ISOPE
Certifications: Ham Radio Technician license, Level 1 rocketry certification