Adrien Carrou

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Education

Johns Hopkins University expected Dec 2026 M.S. in Electrical and Computer Engineering.

San Jose State University (SJSU) B.S. in Computer Engineering

Work Experience

Software Engineer Maxar Technologies   **Dec 2023 – Present**

- Developed tests for components and integration, enhancing flight software performance and minimizing verification errors.
- Oversaw the use and optimization of proprietary software tools, enhancing test efficiency.
- Modernized and streamlined legacy tools to bolster system compatibility and performance.

Test Automation Engineer Maxar Technologies   **May 2022 – Dec 2023**

- Developed and configured the automation pipeline for simulations and Satellite test scripts.
- Wrote Documentation of work completed, configuration, and how to run/use the pipeline.
- Leveraged Linux and Python libraries to enhance development processes and automation reliability.

Engineering Intern Alef Aeronautics   **Feb 2021 – Aug 2021**

- Engineered three drone prototypes, achieving optimal hardware and firmware configurations for test flights.
- Led a team of 4 engineering interns to test prototyped drones for transitional flight.
- Programmed the Ackerman steering solution in C/C++ employing Arduino, VESC hardware, and software solutions.

Leadership Experience

Club Lead SJSU Robotics Intelligent Systems   **Sep 2021 – Aug 2023**

- Oversaw and guided a team of 11 budding engineering students.
- Headed the primary intelligence systems stack for the rover competition, focusing on advanced path tracking and positional accuracy.

Project Lead Cube3   **Sep 2022 – Jan 2023**

- Directed a team of 15 engineers across 3 specialized sub-teams to engineer a Cansat for imminent launches.
- Led the electrical and controls team, applying advanced industry technologies and best practices

Projects/Clubs

Astraeus-I https://github.com/Astraeus-I   **May 2023 – Present**

C/C++, Embedded Systems, Avionics Development Board, Firmware

- Developed firmware drivers for Astraeus-I, our advanced avionics development board, which is intricately designed and equipped with state-of-the-art sensors and modules, utilizing ADC, GPIO, SPI, I2C, and UART technologies.
- Crafted the detailed PCB layout and schematic, ensuring optimal reliability and efficiency consistent with the board's advanced capabilities.
- Drafted comprehensive documentation to guide users in the application and utilization of drivers and board packages for functionality.

Libhal https://github.com/libhal   **May 2023 – Present**

C/C++, Embedded Systems, Firmware, Open source

- Developed intuitive device drivers for various sensors and crafted user-friendly platforms for seamless integration.

Hackathon Projects https://tinyurl.com/yycn2vjn

C/C++, Firmware, PlatformIO, Embedded Systems, Sensors

- Successfully contributed to five innovative hackathon projects, garnering significant achievements and accolades.

Robotics Club (SJSU) https://github.com/SJSURoboticsTeam   **Sep 2021 - Current**

- As an integral member of the control systems, mission control, and intelligent systems teams, I contributed to refining the rover's driving and steering mechanisms, enhancing both backend and frontend web server functionalities, and implementing advanced GPS guidance and computer vision solutions.
- Guided students in mastering controls and intelligent systems, accelerating the team's advancements

Cube3 (Satellite) Club (SJSU) https://github.com/Cube-3-San-Jose-State   **Sep 2022 – Current**

- As a mentor in the club, I took charge of the Cansat's development, incorporating various sensors and modules for computation and communication. This was achieved using a custom development board I designed (Astraeus-I), which leverages the Libhal firmware library.

Skills

Programming Languages: C/C++, Python, Bash, VHDL, Java, Tcl, icl2
Technologies: Linux, Zephyr RTOS, Embedded Systems, Firmware, PCB Design, FPGA Design, IoT, Docker