Joseph Brown

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Summary

Second year Electrical Engineering major at UC Riverside. Apart from my academics, I work to develop a low cost attitude control system for a CubeSat, as well as tutor math and physics. In my free time I mentor FRC Team 589 and like to give back to my community.

Education

University of California, Riverside — Riverside, CA
Bachelor of Science, Electrical Engineering, GPA: 3.57 — *Sept. 2019 – June 2023*

Experience

ADCS Lead Engineer, CubeSat — November 2019 – Present
Aerospace Systems @ UCR — *Riverside, CA*

- Working in a team developing a low cost nanosatellite that will be put into orbit through the NASA CubeSat Launch Initiative.
- I engineer solutions utilizing custom magnetorquers to attitude correct the satellite, as well as finding ways to determine attitude of the satellite while in orbit.

Tutor, Math and Physics — Sept 2020 - Present
Freelance — *Online*

- Tailor teaching style and content for each client. Cover all maths and physics through AP Calculus and AP Physics.

Mechatronics Engineering Intern — Oct 2019 - Jan 2020
ARKS: Self Driving Warehouse Carts — *Riverside, CA*

- Designed and developed an electrical box for a warehouse automation robot that interfaced motor controllers, a power supply, and microcontrollers.

FRC Robotics Engineer — Aug 2015 - June 2019
FRC Team 589 — *La Crescenta, CA*

- Programmed various teleop functions for the robot in Java on the TI roboRIO.
- Fabricated and welded metal structures for the robot out of aluminum and steel.
- Managed a competition environment as a team leader and robot driver.

CAD Intern — June 2017 - Aug 2017
ParkPlus, CA — *Sun Valley, CA*

- Worked alongside professionals to design robotic parking garage systems for clients.

Coursework

Embedded Systems and Logic Design | *EECS 120B*

- Deconstructed problem statements to wire and program small applications onto the m1284p MCU.
- Used Xilinx to simulate test-environments on a virtual FPGA.

Machine Organization and Assembly Language Programming | *CS 061*

Skills

Languages: Java, Python, C/C++
Tools: 3D Printing, Spice Simulations, AutoDesk, Excel, Arduino IDE, AVR
Interpersonal: Teaching, Leadership, Mentoring

Volunteering

FIRST Mentor | *Leadership, Teaching* — Aug 2015 – Present

Honors

Eagle Scout, April 2018