Brandon Comins

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Work Experience

2022 | **Code Coach at theCoderSchool** Irvine, CA
Taught as a Code Coach at theCoderSchool, where I had the opportunity to teach elementary and middle school students how to code using Python, Scratch, and Java. Developed strong communication and instructional skills by effectively explaining complex programming concepts in a way that was accessible to students of all skill levels.

2021 | **Robotics Teacher for RoboQ** Online
Served as a remote Robotics Teacher for high school students, focusing on Arduino robotics. Led instructional sessions on programming, soldering, and computer-aided design (CAD). Strengthened communication skills by ensuring each student comprehended the material and providing tailored support to meet individual needs.

Projects

2022 | **Desktop Pet** Python github.com/BrandonComins/Desktop-Pet
Developed an engaging desktop pet application with a unique feature: the pet occasionally steals the user's mouse when left idle. This project enhanced my proficiency in Python and provided valuable experience working with the tkinter library.

2020 | **Drone** C/C++ github.com/BrandonComins/Drone
Participated in a class competition where I successfully constructed a drone equipped with sensors to determine optimal moments for deploying a servo-actuated payload. Overcoming initial challenges with aerodynamics, I iteratively redesigned and rebuilt the drone four times until achieving flight capability. Secured 3rd place among 50+ competing groups, demonstrating perseverance and technical competence.

2019 | **Rocket Flight Computer** C/C++ github.com/BrandonComins/Rocket
Led the construction of a custom flight computer for a high school rocketry project, which logged data and utilized sensors to determine optimal parachute deployment. Pioneered the use of a self-built flight computer, becoming the first student in the school's history to tackle this challenge instead of relying on a commercially available solution. Developed essential skills in problem-solving through debugging, wire management, soldering, and gained valuable knowledge about MOSFETs.

2019 | **Fruit Piano** C/C++ github.com/BrandonComins/FruitPiano
Participated in a science fair at Darby Elementary School, showcasing STEM and robotics concepts. Developed a creative project called the "Fruit Piano," demonstrating the fun and engaging aspects of wiring and electronics. Explored unconventional methods, such as using fruit, to complete wiring circuits..

2019 | **RC Car** C/C++ github.com/BrandonComins/RC-Car
Led the construction of a remote-controlled car using Arduino, aiming to inspire children by demonstrating the enjoyable side of robotics. This project provided hands-on experience with speed controllers and introduced me to the implementation of a Bluetooth module for wireless control.

Technical Skills and Qualifications

Languages | Java, Python, C++, C, Verilog, VHDL, MIPS Assembly, Regex, Embeded Systems, Latex, React
Software | Xilinx Vivado, Git Bash, Visual Studio, MATLAB, ROS2, MySQL, STM32, Arduino, Texas Instruments

Education

2019-2023 | **University of California, Irvine** Irvine, CA
Graduated in June 2023, Computer Science Engineering B.S

2019 | **Los Angeles Pierce College** Woodland Hills, CA
Concurrent enrollment with high school

Relevant Coursework

Electrical Devices and Systems, Organization of Digital Computers, Python Programming, Advanced C, Data Structures, Intro to computer graphics, Discrete Mathematics & Probability Theory, Linear Algebra & Differential Equations, Calculus 3, Intro to Software Engineering, Intro to MySQL

Additional Experience

2022 | Software Lead for Legacy Robotics, UCI's Robomaster University League's Team
2020-2022 | Mentor High Tech Los Angeles in FRC (First Robotics Competition)
2019 | Computer Teacher at One Generation
2019 | Team Captain of High School FRC team (First Robotics Competition)
2019 | Mentor Darby Elementary in Lego Robotics (First Lego League)
2018 | Camp Counselor for Lego Robotics Camp
2016-2018 | Volunteer at Motion Picture Funding Hospital