

Brendan Blacklock

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EDUCATION

Texas Tech University, Lubbock, Texas
Bachelor of Science in Computer Engineering
Minor in Mathematics

Graduation Date: December 2022
GPA: 3.906

EXPERIENCE & PROJECTS

Automated Catapult – Raspberry Pi 4

Embedded Software Engineer

August – December 2021

- Autonomous catapult capable of launching a projectile at a found target and making automatic adjustments to perfect the launch.
- Developed Python code to detect target, calculate target distance, adjust launch angle, and determine position of projectile after launch.
- Employed OpenCV for edge-based segmentation in the HSV color space to detect and transmit position of the target and projectile.
- Utilized I2C communication protocol to transmit data between accelerometer and Raspberry Pi.

Supermarket System

Lead Developer

August – December 2021

- Supermarket system developed in Java to checkout customers while dynamically updating inventory.
- Devised, modeled, and programmed the system using the incremental development process.
- Developed graphical user interface for checkout subsystem using JavaFX.
- Designed and constructed database tables for Microsoft Azure SQL database.

Rover 5 – FPGA

VHDL Design Engineer

January – May 2021

- Autonomous robot capable of navigating a playing field to search for potentially hazardous locations.
- Developed Verilog modules for motor control, wall avoidance, and morse-code communication.
- Analyzed modules by creating testbenches and running logic simulations in Xilinx Vivado.
- Constructed and tested circuits for motor control, overcurrent protection, and the morse-code transmitter/receiver.

Texas Tech – Department of Chemistry and Biochemistry, Lubbock, TX

Student Assistant – Electronics Shop

August 2018 – Present

- Analyzed, arranged, and inputted financial information into various TTU database systems and Microsoft Excel workbooks for departmental accountant.
- Assisted internal faculty and staff with diagnosis and repair of software and hardware issues.
- Maintained and created new webpages for departmental website.

INVOLVEMENT

Eta Kappa Nu – Gamma Nu Chapter

Treasurer

July 2021 – Present

- Managed financial assets of organization and developed financial strategies for upcoming events.
- Communicated weekly with IEEE officers to discuss updates and potential events.

SKILLS

Technical Skills

- Strong: Python, OpenCV, Java, SQL, HTML5, CSS3, Verilog, Microsoft Office, GitHub
- Moderate: C++, JavaScript, PHP, Assembly Language, Git, Microsoft Azure