Kevin Gilman

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EDUCATION:

The University of Arizona, College of Engineering | Tucson, AZ

Bachelor of Science in Electrical and Computer Engineering | *Minor in Statistics and Data Science* **May 2023**

Master of Science in Electrical and Computer Engineering | *GPA 4.0* **May 2024**

SKILLS:

Software: C, C#, C++, CSS, HTML, Java, JavaScript, MATLAB, PHP, Python, R, Verilog

Relevant Coursework: Computer Programming for Engineering Applications, Object-Oriented Software Design, Fundamentals of Computer Architecture, Knowledge-System Engineering, Microprocessor Organization, Circuit Theory, Digital Communication Systems, Fundamentals of Information and Network Security, Automatic Control, Engineering Applications of Machine Learning, Principles of AI, Computer-Aided Logic Design, Digital Signal Processing, Radar Signal Processing, Web Development and IoT

WORK EXPERIENCE:

University of Arizona | *Graduate TA for Circuits Course* | Tucson, AZ **Aug. 2023-May 2024**

- Instructed lab sessions, providing clear instructions and troubleshooting assistance to ensure a comprehensive understanding
- Hosted office hours, offering assistance to students for homework assignments and exam preparation, effectively clarifying concepts, providing in-depth problem-solving guidance, and enhancing overall comprehension of circuit theory
- Assisted in grading assignments, while providing detailed feedback to aid in student improvement
- Demonstrated strong interpersonal and communication skills, fostering a positive learning environment where students felt comfortable seeking help and participating in lab activities

INTERNSHIP EXPERIENCE:

EDGE Heating and Air | *Controls Engineer* | Murrieta, CA **Jun. 2022-Aug. 2022**

- Assisted in the design and implementation of an HVAC control system on a construction site
- Conducted fieldwork to assist in system commissioning, calibration, and fine-tuning, ensuring proper functioning and adherence to design specifications
- Assisted in the installation of control components, such as sensors, actuators, and communication devices
- Collaborated with project managers and stakeholders to provide regular updates on project progress

PROJECTS:

APARTMENT PORTAL SOFTWARE | *University of Arizona* | Tucson, AZ **Aug. 2021-Dec. 2021**

- Collaborated with a team of three peers over a semester to design and develop an apartment portal software
- Contributed to the execution of a comprehensive software design lifecycle, encompassing UML design, interaction modeling, coding, testing, and deployment using Java
- Applied the Java Swing framework to craft an intuitive graphical user interface

4-CORE PIPELINED PROCESSOR | *University of Arizona* | Tucson, AZ **Aug. 2021-Dec. 2021**

- Demonstrated proficiency in computer processor design, utilizing an FPGA-based implementation
- Executed a video processing algorithm using MIPS ISA and deployed it on the FPGA-based emulation of the processor
- Collaborated with a team of three to design a custom processor aimed to optimize a video processing algorithm through datapath design
- Engineered a 4-core architecture to enable parallel execution of instructions
- Tailored custom instructions optimized to perform the video processing algorithm on the designed processor
- Secured victory in a class competition by achieving the lowest cycle count

GPS TRACKING ROBOT CAR | *University of Arizona* | Tucson, AZ **Jan. 2022-May 2022**

- Collaborated with a team of three to design and construct an autonomous robot car capable of tracking the coordinates of a cellphone while maintaining a predefined following distance
- Programmed C++ code to interface with I/O ports on an AVR microcontroller, enabling precise control over the car's movement
- Utilized sensors including the HMC 5883L compass, Adafruit ultimate GPS, and HC-05 Bluetooth module to provide essential input data to the microcontroller, facilitating autonomous navigation
- Applied various communication protocols to transmit data from sensors to the microcontroller to drive motor outputs

AUTOMATED UNIVERSAL PART SINGULATOR | *University of Arizona* | Tucson, AZ **Aug. 2022-May 2023**

- Collaborated with a team of six to design and build a flexible part feeder for use in automated assembly lines
- Designed and implemented the electrical system, including power distribution, control panels, and wiring layouts
- Developed software algorithms and control logic, enabling precise part manipulation and motion control with gripper
- Utilized OPC UA communication protocol to transmit pixel coordinate values from smart camera to machine controller
- Conducted software testing and debugging to identify and resolve any software-related issues or malfunctions
- Conducted system integration testing to validate the functionality and performance of the software control system
- Collaborated with a multi-disciplinary team of engineers including mechanical, optical, and systems engineering