Keyshon Howard

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EDUCATION

University of San Diego Shiley-Marcos School of Engineering Graduation: May 2025
BS/BA in Electrical Engineering
Minor in Computer Science
Minor in Mathematics

Relevant Courses

Signals and Systems, Embedded Systems Design, Electrical Circuits, Electronics I and II, Principles of Electric Power, Semiconductor Electronic Devices, Digital Design, Digital Signal Processing and Application

SKILLS

Software: Matlab, Multisim, VHDL, Java, Python and programming in C
Hardware: Power supplies, transistors, Oscilloscopes
Operating Systems: Linux, Raspberry PI, Mac OS, Windows
Languages: Spanish (Intermediate)

PROJECTS

Engineering Robot Car Design Project Fall 2019

- Collaborated on a multidisciplinary team to develop a sensored programmable robot car
- **Wired a Raspberry Pi** board and wrote pseudocode to control the movements of the car through an ethernet connection
- **Outcome**: Successfully demonstrated the functionality of the robot car by maneuvering it through a pre-built obstacle course
- **Impact**: Highlighted the team's ability to collaborate across disciplines and deliver a functional prototype

Digital Design Final Project Fall 2023

- **Programmed a BASYS board using VHDL code** to count inputs using multiple seven segment displays to act as a five second up counter
- Incorporated a full counter to instantiate the count, a Finite State Machine and a one second counter to make a timer, A counter with a reset function, and a clock divider to manage the display time of the count
- Created a project report detailing all individual sections of the design including code, diagrams, analysys and a video of the working final product
- **Impact**: Demonstrated proficiency in digital design principles and VHDL programming, culminating in a comprehensive project report showcasing the design process and final product

Embedded Systems Design Final Project Spring 2023

- **Composed code in C** in order to read the analog output voltage of a temperature sensor
- Designed a circuit to implement a temperature sensor, fan motor interface, and LCD with an STM32 Nucleo board
- Enabled the hardware to act in accordance to the sensor reaching a certain threshold voltage an activating a fan motor when that threshold is exceeded
- **Impact**: Showcased practical application of C programming and hardware design skills, resulting in a functional solution for temperature regulation

Electronics Lab Experiment Spring 2024

- Designed and analyzed a two stage BJT amplifier to calculate the Q-point and midband voltage gain of the circuit
- **Developed a Multisim simulation model** of the circuit to compare and verify our calculations
- Created a corresponding project report incorporating models, calculations and graphical results involved in the experiment
- **Impact**: Demonstrated strong understanding of electronic circuit design principles, evidenced by accurate simulation results and comprehensive project documentation

EXPERIENCE

University of San Diego, Department of Athletics San Diego, CA

Athletics Facilities Support August 2019-Present

- Greet incoming visitors and customers professionally and provide friendly, knowledgeable assistance

Critical Thinking & Problem Solving:

- Utilize critical thinking skills to address various challenges encountered during athletic events, including managing interactions with spectators and consulting with coaches and managers to develop solutions for optimizing event operations

Teamwork & Collaboration

- Collaborate closely with coworkers and cross-functional teams to maintain a safe, efficient and seamless operational environment

Leadership:

- Mentor, train and support new staff members in office policies and procedure

VOLUNTEERING

University of San Diego, STEM Outreach Fall 2023-Present

Volunteering mentor

- Performing scientific experiments with elementary level kids and teaching basic concepts