JORGE MINJARES

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EDUCATION

Bachelor of Science in Electrical Engineering **Expected:** Fall 2023
The University of Texas at El Paso (UTEP) GPA: 3.50/4.00
Course work: Software Design 1, Microprocessor Systems 1, Microprocessor Systems 2, Electronics 1

SKILLS

- Fluent in written and oral English and Spanish
- Extensive use of Microcontrollers and C
- Proficient in C++, Oscilloscope, Digital multimeter (DMM) and version control (Git)
- Basic knowledge of Java, Python, Verilog and printed circuit board (PCB) design,
- Familiar with Assembly Language, Multisim, EasyEDA and LTspice

TECHNICAL EXPERIENCE

Aerospace Center (cSETR) El Paso, TX
Undergraduate Research Assistant Apr. 2022 – Present

- Developed a 3U CubeSat with a multidisciplinary team of 5 members, leveraging strong collaboration and multitasking to meet deadlines
- Assisted in API documentation through Doxygen to reduce software deployment
- Populated custom 2-layer printed circuit board (PCB) design and ensured functionality with oscilloscope and DMM
- Wrote payload firmware in C for ARM Cortex M microcontroller (TM4C123)
- Utilize version control software (Git) to update and keep track of software changes

TECHNICAL PROJECTS

Remote-Controlled (RC) Car El Paso, TX
University of Texas at El Paso (UTEP) Feb. – Apr. 2022

- Built short-distance wireless communication via Bluetooth (HC-05) by sending commands through Universal Asynchronous Receiver-Transmitter (UART) protocol
- Delivered custom embedded software for MSP432 using C programming language
- Learned version control software (Git) to update and keep track of software changes
- Design custom a 2-layer Printed-Circuit-Board (PCB) using EasyEDA

Digital Voltmeter El Paso, TX
University of Texas at El Paso (UTEP) Jan. - Feb. 2022

- Developed and tested embedded system with an MSP432 that provided effective readings
- Displayed voltage readings through a Liquid Crystal Display (LCD) for visualization
- Delivered a 98% accuracy system, using a 14-bit Analog-to-Digital Converter (ADC) sampling at 100ms (10Hz)

Breathalyzer El Paso, TX
University of Texas at El Paso (UTEP) Dec. 2021

- Designed, developed, implemented, and tested custom embedded software for MSP432P401R
- Read Alcohol Gas Sensor (MQ-3) with the internal Analog-to-Digital (ADC) within the MSP432 with a 80 percent accuracy
- Implemented vibration sensor, buzzer, and LEDs to indicated if the alcohol threshold was exceeded