JORGE MINJARES

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EDUCATION

Master of Science in Computer Engineering	**Expected:** Fall 2024
The University of Texas at El Paso (UTEP)	GPA: 3.57/4.00
Bachelor of Science in Electrical Engineering	**Awarded:** Fall 2023
The University of Texas at El Paso (UTEP)	GPA: 3.42/4.00

TECHNICAL EXPERIENCE

Sandia National Laboratories (SNL)   Albuquerque, NM
R&D Graduate Intern   Jan. 2024 – Present

- Created a Python script using Pandas, Matplotlib, and Argparse to generate and analyze graphs from GUI-collected data
- Automated the creation of JLink files with a Python script utilizing dictionaries and file handling.
- Leveraged JSON to efficiently deploy over 35 boards, significantly reducing the deployment flash time
- Tested firmware functionality and new features, addressing over 8 issues and successfully deploying more than 8 merge requests
- Enhanced and expanded the project wiki page documentation, enabling users to better understand the project and providing clear instructions on how to use specific features

Sandia National Laboratories (SNL)   Albuquerque, NM
R&D Undergraduate Intern   Jun. – Dec. 2023

- Assessed FPGA boards to determine their suitability for project requirements
- Improved project documentation by implementing Markdowns to enhance clarity and readability
- Developed a Python script to read GPS streams for sensor deployment on Raspberry Pi Zero
- Introduced asynchronous multi-channel scanning on Raspberry Pi 4 Model B

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

- Developed a 3U CubeSat with a multidisciplinary team of 5 members, leveraging strong collaboration and multitasking to meet deadlines
- Learned documentation system (Doxygen) to update existing software documentation
- Populated custom 2-layer printed circuit board (PCB) design and ensured functionality with oscilloscope and Digital Multimeter
- Assisted with 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

UTEP   El Paso, TX
Rover for Automated Soil Acquisition (RASA)   Jan. – Dec. 2023

- Leveraged MSP432 software development kit (SDK) to deploy real-time (FreeRTOS) software in C
- Developed Board Support Package (BSP) with Motors, Sensors, Bluetooth, and GPS modules drivers
- Wrote remote controller firmware using MicroPython for rapid software deployment
- Designed custom 2-layer remote controller (PCB) using EasyEDA with RP2040 microcontroller

SKILLS

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