Mason R. Muñoz

Nederland, Texas | (409)-365-7507 | masonzonum18@gmail.com

EDUCATION

Lamar University - *B.S. Mechanical Engineering* .... May 2022
Cumulative GPA: 4.0/4.0 | Honors: Plummer Award Recipient, Summa Cum Laude
Certifications: Engineer-In-Training (E.I.T.) #80908 | Certified SolidWorks Associate (CSWA)

PROJECTS

Texas Space Grant Consortium Design Competition .... August 2021 - May 2022

- Led a team to design and manufacture a self-deployable telescopic antenna mast to fit on the NOVA-C Lunar Lander using SolidWorks for 3D modeling, and conducted Finite Element Analysis to ensure structural integrity
- Performed electrical wiring to integrate the antenna mast with the lunar lander's systems and power the motor, ensuring functionality and reliability
- Worked closely with NASA employees, communicating each step in the design process during weekly check-ins, showcasing strong presentation skills
- Conducted engineering analysis and computer simulations to validate design performance, and authored a comprehensive technical paper submitted to the Texas Space Grant Consortium

PC Thermal Efficiency Testing .... April 2022 - May 2022

- Empirically examined the thermal efficiency of different cooling mechanisms for a CPU, including a heat exchanger system, convective cooling through airflow, heat sinks, and various combinations of these methods
- Authored a comprehensive report comparing test results to theoretical values based on heat transfer equations

Home Networking .... December 2024 - Present

- Installation and maintenance of repurposed Dell computer to serve as a hypervisor for virtual machines and containers running various Operating Systems
- Configured a web server on a headless Linux distribution using NGINX with a reverse proxy and SSL certificate, enabling secure access over the internet
- Employed VLAN tagging to isolate untrusted devices and enhance the security of the whole network

EXPERIENCE

Staff Pianist/Organist, Sound Engineer, **St. Charles Borromeo Catholic Church** .... August 2015 - Present

- Performed piano and organ rep for traditional masses and funerals; attended rehearsals weekly
- Optimized the professional sound and network infrastructure running with DANTE protocol to improve the sound quality for both the performing musicians and the audience
- Executed the duties of a stagehand; Leveraged acoustic theory to determine ideal placement of microphones to avoid feedback and other problems during mass

Research Assistant, **Lamar University** .... May 2021 - August 2021

- Assisted the principal researcher in efforts to understand and combat the corrosion of vessels in the gulf
- Prepared delicate samples of various metals in a lengthy process that involved soldering, mounting in resin, grinding, and polishing
- Analyzed samples in microscopes after electrolytic corrosion, determining sizing and density of corrosion pits using imaging software

Mathematics Instructor, **Mathnasium** .... May 2019 - August 2019

- Tutored students in various levels of mathematics following the Mathnasium core teaching principles
- Worked within a team of instructors to log student progress and maintain effective communication with guardians

SKILLS

Mechanical Design: SolidWorks, 3D Printing, AutoCAD, Simulink, Ansys Fluent
Programming Languages: Python, MATLAB, Javascript, HTML, CSS, LaTeX
Software: Blender, Photoshop, Microsoft Office Suite, Git, After Effects