Andrew Molen

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Education

University Of Texas Rio Grande Valley — Edinburg, TX
Bachelor of Science In Pure And Applied Physics — *August 2024-May 2028*

San Jacinto Community College Dual Credit — Pasadena, TX
Associate's in Liberal Arts — *August 2020 – May 2024*

Experience

Projects

Hybrid Rocket Motor Research and Development (UTRGV Rocket Launchers) August 2024 – Present

- Utilized engineering software including SolidWorks for detailed 3D modeling and design, Open Rocket for simulation and performance analysis, Ansys for structural and thermal simulations, and Fusion 360 for integrated CAD, CAM, and CAE solutions.
- Engaged in the research and development of hybrid rocket motors, focusing on innovative design solutions and performance optimization.
- Collaborated with a multidisciplinary team to assemble, test, and refine hybrid rocket propulsion systems.
- Contributed to the successful execution of test flights, including pre-launch preparations, in-flight monitoring, and post-flight analysis.
- Assisted in the development of testing protocols and data analysis to ensure compliance with safety and performance standards.
- Supported documentation and reporting activities to track project progress and outcomes.

Solid Rocket Motor Side Development (UTRGV Rocket Launchers) August 2024 – Present

- Utilized engineering software tools for modeling, simulation, and performance analysis, contributing to the successful integration of the solid rocket motor into the competition vehicle.
- Collaborated with a dedicated team to develop and refine propulsion systems, focusing on performance optimization and safety.
- Engaged in comprehensive documentation and reporting to track project progress and outcomes

Technical Skills

Languages: Python
Programs: SolidWorks, Open Rocket, Ansys, Fusion 360