

## Isaac Nathaniel Basurto

(915)999-1397 | Inbasurto@miners.utep.edu | El Paso TX | <https://abamant.github.io/>

### EDUCATION

Bachelor of Science in Aerospace Engineering

Anticipated: 12/2025

The University of Texas at El Paso (UTEP)

Overall GPA 3.43/4.00

#### Center for Space Exploration and Technology Research (cSETR)

Mechanical / Aerospace Engineering Department

#### Undergraduate Researcher

June 2021 – Current

- Systems Engineering: Managed and supervised project development on the cold gas flight system; analyzed and determined requirements and project priorities, devised strategies to integrate team inputs and synthesize comprehensive design solutions meeting stakeholder expectations. V development life cycle and SWOT analysis recognize requirements and pushed the first model in one semester.
- Digital Modeling: Designed and coordinated the creation of a virtual model for the cold gas flight system; communicated requirements to the test team, facilitating analysis and production planning to validate flight system concepts. Created 8 flight system designs and specialize in rapid prototyping to create system mockups.
- Test Stand: Engineered and executed testing on four test stands for the cold gas and lox/lch4 systems; trained in cryogenic and compressed gas handling to optimize engine performance analysis. Designed, Created, and tested 4 test stands that have provided accurate data on the system performance.
- Design Work: Developed eight flight system designs specializing in rapid prototyping; utilized various software tools to efficiently meet project requirements and achieve stakeholder goals within weeks.

#### Solid Rocket Design Workshop

Instructor: Pat Lampton

#### Attendee

August 7-11, 2023

- Workshop Participation: Earned certification by designing critical components of a solid fuel rocket; administered project elements such as motor and nozzle design, facilitating the creation of a system to intercept rockets within specified parameters under challenging conditions. Achieved interception within 200 km up to 60 km in less than 120 seconds with less than 20 g's impact on a 5000 kg payload

#### Federal Aviation Administration

Air Traffic Controlling

#### Intern

June 2023 – August 2023

- Air Traffic Control Collaboration: Assisted in managing air traffic flow at El Paso International Airport by organizing and directing radar and ground communications; ensured accurate and efficient information relay across multiple control positions.
- Radio Technician Support: Implemented and maintained radio communication systems; troubleshoot and resolved technical issues, enhancing operational reliability and performance.
- Software Support: Upgraded critical reference information for airspace flight control on IPD4 systems using MS-DOS; maintained system integrity and access to up-to-date flight data.

#### Imperial Group branch of Equis Financial

3800 N Mesa St El Paso

#### Field Underwriter

June 2020 – December 2021

- Policy Underwriting: Administered and managed client policy underwriting for Imperial Group; conducted client assessments, traveled for in-person sales, and successfully increased client portfolio.
- Client Relationship Management: Facilitated underwriter appointments and client interactions by organizing schedules and creating outreach materials; enhanced client engagement and business expansion.

### Skills

- Professional use of Star-CCM+, Fluid Dynamics
- Professional use of NX, 3D modeling
- Professional use of Mathcad, Analytical tool
- Professional use of GFSSP, Generalized Fluid System Simulation Program
- Professional use of Fusion 360, 3D Modeling
- Solid Rocket Design Workshop Certified