Danté Herrera

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EDUCATION

Texas A&M University
Fall 2018 - Spring 2022
National Hispanic Recognition Scholar
Aerospace Engineering
Astrophysics Minor
GPA: 3.752
GRE (V/Q): 163/166

COURSEWORK

Calculus I-III
Differential Equations
Programming in Python
Aerospace Computations
Principles of Electrical Engineering
Physics: Mechanics, Electromagnetism,
Modern Astronomy,
Astrophysical Research
Technical Business Writing
Aerothermodynamics
Numerical Simulation
Theoretical Aerodynamics
High Speed Aerodynamics
Aerospace Structural Analysis I & II
Aerothermodynamic Propulsion
Aerospace Vehicle Design

SKILLS

SOFTWARE

Python
HTML/CSS/Javascript/PHP/SQL
LabVIEW
Siemens NX/SolidWorks
Microsoft Office
LaTeX

TECHNICAL

Soldering/Wiring/Circuit Diagnostics
Circuit Design
DAQ Systems/Automation
Micro-controller Systems

COLLABORATION

Communicating Complex Ideas
Teaching
Team-building
Emotional Intelligence

PERSONAL STRENGTHS

Independent Research
Public Speaking
Time Management

EXPERIENCE

LOS ALAMOS NATIONAL LABORATORY | R&D Engineer

JUL 2022 – Current | Los Alamos, New Mexico
Data Acquisition Systems and Automation

- Developed LabVIEW, microcontroller based, and analog DAQ and control systems
- Developed python based programs for data analysis and automation
- Characterized and developed gas transfer systems

SPACEX | Starship Launch Intern

SEP 2021 – DEC 2021 | Boca Chica, Texas
Developed Orbital Launch Pad Fluids Systems

- Implemented NX and Python to design system models and drawings
- Designed, built, and operated propellant and pneumatic transfer systems for the orbital launch pad
- Interfaced with tech and weld leads on a daily basis to manage orbital pad fluids system construction

TAMU SOUNDING ROCKETRY TEAM | Propulsion Team Member

JAN 2019 – Present | College Station, Texas
DESIGNED AND BUILT HYBRID ROCKET ENGINE

- Leveraged SolidWorks to design hybrid engine combustion chamber, housing, fuel grain, and fluid transport system
- Designed small scale additives test engine and testing procedure resulting in over 15 successful tests
- Built, tested, and characterized full scale sounding rocket engine with an average measured thrust in excess of 900 lbf

TEXAS A&M AERO DEPT. | Undergraduate Researcher

AUG 2018 – MAY 2021 | College Station, Texas
INVESTIGATED HYBRID PROPULSION CHARACTERIZATION

- Developed fuel grain regression rate model for HTPB and nitrous oxide combustion and measurement technique for chamber temperature
- A presentation of my research received first place at student research week 2021 for the undergraduate engineering section

TEXAS A&M AERO DEPT. | Grader - Aerothermodynamics

JAN 2020 – DEC 2020 | College Station, Texas
GRADE STUDENT EVALUATIONS

- Continually improved my technical mastery and communication skills by grading and offering supplementary content for Aerothermodynamics

TEXAS A&M MATH DEPT. | MATH 251 Help Session Leader

JAN 2019 – JUL 2019 | College Station, Texas
TEACH MULTIVARIATE CALCULUS

- Cultivated an open and inclusive environment for students to ask questions and reinforce concepts taught in their multivariate calculus class, such as multiple integrals, integration in alternate coordinate systems, and physical applications of calculus