Danté Herrera

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EDUCATION

Texas A&M University
Honors Engineering College
Aerospace Engineering
Astrophysics Minor
Fall 2018 - Present
GPA: 3.826
Expected Graduation: May 2022
National Hispanic Recognition Scholar

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
Siemens NX
SolidWorks
Python
LaTeX
Microsoft Office

TECHNICAL
Fluid Transport Systems
Wiring
Machining
Circuit Building

COLLABORATION
Communicating Complex Ideas
Teaching
Team-building
Emotional Intelligence

PERSONAL STRENGTHS
Independent Research
Public Speaking
Time Management

EXPERIENCE

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

UNIVERSITY OF TEXAS AT DALLAS | Research Intern
MAY 2017 – SEP 2017 | Richardson, Texas
SYNTHESIZE AND RUN DIAGNOSTICS ON YBCO
- Synthesized and researched YBCO sample puck utilizing X-ray diffractometer and physical property measurement system (PPMS)
- Presented research findings at Nanotech Institute exposition (100+ undergraduate STEM students & research advisors)