

Hugo De La Garza

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WORK EXPERIENCE

Energy Institute High School Houston, TX

Teaching Assistant for Engineering Design and Presentation (SolidWorks) Aug. 2024 – Present

- Collaborated with the instructor to develop strategies for preparing students for the Certified SolidWorks Associate exam
- Managed distribution of laptops, mice, and SolidWorks textbooks to ensure smooth classroom operations
- Assisted students with SolidWorks assignments, troubleshooting, and mastering 3D modeling concepts

NASA - National Aeronautics and Space Administration Houston, TX

Temperature and Pressure Mitigation Technician Jun. 2024

- Supported the Echo Locators team in developing a protective life-support system for a lunar base
- Specialized in determining optimal power sources and ensuring stable pressure levels for sustainability

High School Aerospace Scholar Oct. 2023 – Mar. 2024

- Used Fusion360 and SolidWorks to prototype spacecraft and satellites
- Designed a 3D habitat/base for Titan to withstand storms, radiation, and freezing temperatures
- Worked with and received mentorship from NASA engineers and educators

Lazarus Energy Holdings, LLC Houston, TX

Intern Jun. 2023 – May 2024

- Collaborated on deliverables focused on education, entrepreneurship, secondary education, and energy industry knowledge
- Strengthened project management, communication, and time-management skills through hands-on assignments
- Volunteered alongside colleagues, setting impact records at the Houston Food Bank and Bread of Life

EDUCATION

Energy Institute High School Houston, TX

Distinguished High School Diploma, Multi-Disciplinary Studies and STEM Expected Jun. 2025

Cumulative GPA: 4.62 W, 4.0 UW

Relevant Coursework: AP Calculus BC, AP Computer Science A, AP Physics 1, Intro to Engineering Design, Principles of Engineering, Environmental Sustainability, Engineering Design and Presentation, Engineering Design and Development

Community Based Organizations: Breakthrough Houston, EMERGE

Yale Young Global Scholars New Haven, CT

Solving Global Challenges, Jul. 2024 - Jul. 2024

Relevant Coursework: AI and Ethical Technology (Capstone)

PROJECTS

Raspberry Pi Bitcoin Lightning Node and Proxmox Virtual Environment Cluster Dec. 2023 - Present

- Deployed a Raspberry Pi cluster to serve as a Bitcoin Lightning Node, ensuring secure cryptocurrency transactions
- Configured and maintained a secure Proxmox virtual environment for remote internet access

Ender 3 Pro to Voron Switchwire Conversion Nov. 2023 - Dec. 2023

- Transformed an Ender 3 Pro into a Voron Switchwire, increasing print speed by 125%
- Transitioned to Klipper firmware, providing the flexibility to modify and fine-tune printer settings for optimal results

ADDITIONAL

Technical Skills: Advanced in SolidWorks, Fusion360, 3D Printing, Soldering; Proficient in Java, JavaScript, Python, AutoCAD

Languages: Fluent in English, Fluent in Spanish

Certifications & Training: Certified SolidWorks Associate in CAD Design, Electrical Design, Additive Manufacturing, Sustainability, Certified 3DExperience Associate in 3DSwymer, OSHA 30-Hour General Industry Safety and Health

Awards: QuestBridge National College Match Finalist, Gates Award, Fulcrum Award, Elon Musk Award, QuestBridge College Prep Scholar, Yale Young Global Scholar