Victoria Porto

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23B Homepark Road, London, SW19 7HP, UK
UK Citizen

Education

Stanford University, Stanford, CA — 2022 - 2027
Master of Science in Aeronautics and Astronautics — GPA: 4.035
Bachelor of Science in Mechanical Engineering

Relevant Coursework: Mechanics of Materials, Circuits 1, Intermediate Thermodynamics, Heat Transfer, Intermediate Fluids, Mechanical System Design, Air & Space Propulsion, Dynamic Systems & Controls, Computational Engineering, Mechatronics, Feedback Control

Work Experience

MT Aerospace, Augsburg, Germany — Jun - Sept 2025
Space Systems Engineering Intern
InSPoC-2: In-Orbit Cryogenic Fluid Transfer Demonstrator and In-Orbit Propellant Depot
- Created a dynamic battery buffer model to evaluate power demand under varying sunlight/eclipse scenarios.
- Designed thermal cooling channels for cryogenic tanks for zero boil-off and specified pump for cooling circuit
- Built data and power schematics; co-authored ESA proposal commercial file.
- Developed an Orbital Transfer Vehicle concept using aerobraking.
- Modeled propellant demand across missions to determine optimal depot sizing

SALTO (Reusable Strategic Launcher Technologies and Operations)
- Conducted trade-offs and co-authored ESA deliverable on integration of landing legs and aerodynamic surfaces for reusable boosters.

Helicoid Industries Inc., London, UK — Jun - Sept 2024
Finite Element Analysis (FEA) Intern - R&D
- Created custom VUMAT subroutines in Fortran for 3D damage modeling of helicoidal composites using Abaqus.
- Simulated high-strain failure mechanisms for aerospace-grade helicoidal composite materials.

Stanford Student Space Initiative, Stanford, US — 2022 - 2024
Systems/Project Lead - Fountain Hopper Rocket Project (2023 - 2024)
Structures/Propulsion Team Member (2022 - 2024)
- Led 20+ person team developing a vertically landing hybrid rocket with thrust vector control for Propulsive Lander Competition.
- Designed & analyzed rocket systems: injector sizing, feedline P&ID, CAD of structural components, etc.

Research Experience and Projects

Accessible Airplane Entry Project with Boeing — Sep 2025 - Present
Systems Engineer
- Designing and prototyping an airplane-specific wheelchair enabling independent boarding for people with disabilities.
- Developing modular attachment for personal wheelchairs with struts deployed by linear actuators.

Stanford Plasma Physics Lab, Stanford University — Nov 2024 - Jun 2025
Undergraduate Researcher - Department of Mechanical Engineering
- Design and development of an Electron Cyclotron Resonance (ECR) Thruster.

Extreme Environment Microsystems Laboratory, Stanford University — Feb 2023 - Jun 2024
Undergraduate Researcher - Department of Aeronautics and Astronautics
- Co-inventor on a pending US patent for mycelium-based aerogel insulators.
- Performed mechanical and chemical characterization of bio-composites using Instron compression testing and Raman spectroscopy on project in collaboration with NASA Ames

Honors and Awards

- Mechanical Systems Design: Best Design Award, 2025
- Tau Beta Pi - Engineering Honors Society (Top 12% of all juniors in the School of Engineering), 2025
- Valedictorian - Ransom Everglades Class of 2022

Skills

Abaqus CAE, Java, Autodesk Fusion 360, Fortran, Matlab, Cantera, Python, KiCAD, 3D printer, Laser Cutter
Languages: English (Fluent), Portuguese (Fluent), French (Intermediate)