FRANCESCO DE LUCA

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SUMMARY

Aerospace Engineering undergraduate with hands-on experience in design, analysis, and testing of engineering systems. Strong interest in applying theoretical concepts to practical aerospace applications; **collaborative**, **fast-learning**, and **highly motivated**.

EDUCATION

Aerospace Engineering – Bachelor of Science – Graduation date: May 2026
Florida Institute of Technology – Melbourne, FL – GPA: 3.00/4.00

Engineering – Associate of Science – August 2022 - May 2023
St. Petersburg College – St. Petersburg, FL - GPA: 3.70/4.00

ACADEMIC PROJECTS

Drone-Rover Hybrid *for search and rescue missions* *JANUARY 2024 – MAY 2025*
Capstone Project – Structures Engineer

- Created and refined CAD designs using **CREO Parametric**, produced physical prototypes through **3D printing**, and iterated designs based on functional testing and integration requirements.
- Successfully delivered PDR and CDR, strengthening teamwork and problem-solving skills.
- Managed cross-functional coordination with avionics and controls teams to ensure seamless component integration.
- Created and maintained detailed design documentation following aerospace industry standards.

LEO SAR Satellite – *Preliminary Project* *JANUARY 2025 – MAY 2025*

- Oversaw Assembly, Integration, and Testing (AI&T) subsystem, Space Vehicle Modes, and Master Equipment List (MEL) of preliminary satellite in quality of **Chief Systems Engineer**.

RESEARCH

Advanced Astrodynamics *JANUARY 2026 – PRESENT*
Research Lab Assistant

- Conducting **advanced astrodynamics research** in CR3BP, Lagrange points (L1/L2) halo orbits, applying nonlinear stability analysis for libration-point mission trajectory design.

Software Design *and* ***Data Analysis*** *AUGUST 2024 – AUGUST 2025*
Research Lab Assistant

- Cooperated with a team of students in the retrieving of data needed for **statistical analysis** through ArcGIS software.
- Used ArcGIS software, **R** and **Python** for Machine Learning, Time-series forecasting and **LSTM**'s design.

Statistical Models *with Application to Geoscience* *MAY 2024 – AUGUST 2024*
Research Lab Assistant

- Collaborated with a **multi-disciplinary team** in the early **design and validation** of an image-classification model for **post-event damage assessment**.

PERSONAL PROJECTS

AI for Industry Challenge *JANUARY 2026 - PRESENT*
Team Lead

- Led a team in the AI for Industry Challenge, coordinating weekly planning, task assignments, and technical integration to drive project progress.
- Defined project scope and technical objectives, breaking down a complex industry problem into achievable milestones and ensuring alignment with competition requirements.
- Managed version control and collaborative development using **GitHub**, ensuring reproducibility, documentation, and seamless integration of team contributions.

REFERENCES AVAILABLE UPON REQUEST