Lucas Vieira dos Santos

Aerospace engineer foc used on using software development to solve complex real-world challenges. Experienced in using Python for developing web applications, machine learning systems, and optimisation tools. Eager to contribute to a team that values technological innovation and problem-solving.

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Education

MSc. Aerospace Control & Simulation – 8.0 GPA
Sep 2021 – Jul 2023
Delft University of Technology
Delft, NL

- Thesis: Created a machine learning-driven autopilot using Python and PyTorch to adapt to unforeseen conditions for enhanced aircraft safety, receiving a grade of 8.5
- Key Projects: Developed an optimization tool to generate flight routes that minimize fuel consumption and noise pollution; Employed machine learning algorithms for the control manipulation of a dual pendulum

BSc. Aerospace Engineering – 8.0 GPA
Sep 2018 - Sep 2021
Delft University of Technology
Delft, NL

- Graduation Project: Performed the detailed design of the control system of a concept space mission to Venus while managing a ten-members team. The project received a 9.3 grade, secured second place at the TU Delft Design/Synthesis Symposium, and was presented at the Air and Space Academy (AAE) Space Exploration conference
- Minor in Computer Science - 8.4 GPA: Acquired skills in software and Web development with Python and C++. A notable project is a Flask web application that uses machine learning algorithms for real-time sentiment analysis of news articles

Experience

Software & Controls Engineering Intern
Apr. 2022 - Sep. 2022
Avy
Amsterdam, NL

- Automation: Developed an Automated Testing Framework to evaluate drones' software and hardware performance
- Web Development: Developed a Django web application for visualisation of drone's flight data
- Software Development: Used Python and C++ for refining the in-house software suite. Key contributions included the improvement of API connections and the optimisation of the drone autopilot
- DevOps: Used agile methodologies, Git, and JIRA in a collaborative setting, while also implementing CI/CD pipelines to streamline development and deployment processes

Recovery Simulations Engineer
Sep. 2020 - Jul. 2021
Delft Aerospace Rocket Engineering
Delft, NL

- Simulation: Engineered a Python-based Wind Tunnel Simulator, offering insights into aerodynamic performance during parachute deployment
- Leadership: Led a two-person team, overseeing technical mentorship and project delivery

Skills

- Software Development
- Web Development
- Data analysis
- Simulations

Technologies

- Python
- C++
- Matlab/Simulink
- Go
- HTML/CSS
- Javascript
- Django
- Flask

Tools

- Git
- Latex
- Jira

Languages

- English (Proficient)
- Portuguese (Native)
- Dutch (Basic)

Hobbies

- Photography
- Crafts
- Boardgames