Lucas Vieira dos Santos

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Summary

Currently pursuing a Master's degree in Aerospace Engineering, I have expertise in flight control systems, aerodynamics, and simulations. Additionally, I am proficient in Python and C++ for software development and machine learning, which have been instrumental in developing my thesis project - a machine learning-based autopilot that learns to control an aircraft under adverse conditions, such as structural damage. As I near the completion of my studies, I am eager to leverage my acquired skills and knowledge in a professional setting.

Education

MSc in Aerospace Control & Simulation
Sep. 2021 - Current

DELFT UNIVERSITY OF TECHNOLOGY
Delft, The Netherlands

- Relevant coursework: Automatic Flight Control Systems, Intelligent control systems and System Identification
- Thesis: Using machine learning techniques to build an autopilot that adapts to unexpected circumstances and failures, allowing the aircraft to remain stable and fly safely

BSc in Aerospace Engineering
Sep. 2018 - Sep. 2021

DELFT UNIVERSITY OF TECHNOLOGY
Delft, The Netherlands

- Relevant coursework: Flight Dynamics, Control Systems, and Aerodynamics
- Graduation project: Demonstrated strong team collaboration skills by working in a team of ten students on a space mission design. Coordinated the project plan and designed the spacecraft's attitude and determination control systems. The project earned a grade of 9.3 and placed second in the TU Delft Design/Synthesis symposium
- Completed a minor in Computer Science, gaining skills in software development and data analysis through various projects, final GPA of 8.4

Experience

Software & Controls Engineering Intern
Apr. 2022 - Sep. 2022

Avy
Amsterdam, The Netherlands

- Designed and implemented an automated testing tool to evaluate the status of the software and hardware of the drones developed at Avy, resulting in increased efficiency and reliability of the testing procedures
- Assisted in enhancing and maintaining existing in-house software, including the drone's PX4 autopilot and visualisation tools for flight data analysis
- Demonstrated expertise in developing software in Python and C++, as well as using software development tools such as Git and JIRA

Extracurricular Activity

Recovery simulations Engineer
Sep. 2020 - Jul. 2021

DELFT AEROSPACE ROCKET ENGINEERING (DARE)
Delft, The Netherlands

- Developed a wind tunnel simulator using Python and C++, which focused on analyzing the aerodynamic effects of in-flight parachute deployment
- Led a team of two developers, providing guidance, setting goals, and tracking progress

Skills

Languages	Portuguese (Native), English (Fluent), Dutch (Basic)
Programming	Python, C++, Simulink, MATLAB, Flask, Django, HTML, CSS, JavaScript
Tools	CATIA, Git, Photoshop, Illustrator, MS Office, LaTeX, Markdown
Interests	Programming, simulations, photography, design, board games, crafts