Lucas Vieira dos Santos

MSc student in Aerospace Engineering - Control & Simulation

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Summary

As a Master's student in Aerospace Engineering, I have expertise in control systems, machine learning (ML), and simulation, as well as proficiency in software development using Python and C++. My thesis work is to develop an ML-based autopilot capable of adapting to failure scenarios and maintaining the control of an aircraft. As I am nearing the completion of my studies, I am eager to apply my skills and knowledge professionally through an entry-level position.

Education

MSc in Aerospace Control & Simulation

Sep. 2021 - Current

Delft University of Technology — *Delft, The Netherlands*

- Automatic Flight Control Systems, Intelligent control systems and System Identification
- Thesis work: 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

High School

Feb. 2012 - Mar. 2015

Colégio Pedro II — *Rio de Janeiro, Brazil*

- Admitted through a selection process for a full scholarship, final GPA of 8.16

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

Logistic Asssistant

Jul. 2016 - Aug. 2016

Olympic Broadcasting Services (OBS) — *Rio de Janeiro, Brazil*

- Coordinated and planned the transportation logistics for the 2016's Olympic Games filming crew, including transportation to venues, accommodations, and food facilities, ensuring efficient operations within the capacity constraints of the locations

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 (Proficient), 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