

Diogo Paulo

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<https://diogocpaulo.github.io/robotics-portfolio/>

Summary

Robotics and AI engineer with a focus on visual localization, perception and deep learning. MSc candidate at KTH collaborating with Ericsson Research on AI-driven 3D scene representations for high-precision pose estimation.

Education

KTH Royal Institute of Technology Stockholm, Sweden
MSc in Systems, Control and Robotics. GPA 4.88/5 (A) June 2026
Relevant Coursework: Machine Learning, Image Analysis and Computer Vision, DL in Data Science.
Projects: Mobile robot navigation integrating LiDAR localization and vision-based perception.

Instituto Superior Técnico Lisbon, Portugal
BSc in Aerospace Engineering. GPA 18/20 (A) Sep 2021 – June 2024
Relevant Coursework: Introduction to Control, Digital Systems, Computational Mathematics.
Projects: VTOL design for medical logistics; helicopter modeling (SolidWorks); atmospheric simulation (MATLAB).

Experience

Ericsson Research Stockholm, Sweden
Master's Thesis Intern Jan 2026 – Present

- Investigating AI-driven 3D scene models as high-accuracy digital maps to enable precise camera positioning.
- Developing a decoupled framework using Python and PyTorch to estimate poses by matching query images against latent scene representations (using RayZer model).

KTH Royal Institute of Technology Stockholm, Sweden
Teaching & Laboratory Assistant Aug 2025 – Present

- Computer Vision:** Assessed labs on Fourier domain filtering, edge detection and 3D reconstruction.
- Machine Learning:** Mentored students in Python-based labs on Decision Trees, SVMs and Bayes Classifiers.
- Automatic Control:** Supervised experiments involving system identification and PID/lead-lag controller design.

Jerónimo Martins Lisbon, Portugal
IT Summer Intern Jun 2023 – Aug 2023

- Gained exposure to SAP systems and corporate IT infrastructure workflows.

Leadership & Activities

AeroTéc - Aerospace Student Organization Lisbon, Portugal
Multiple Roles Sep 2022 – Aug 2024

- Electronics (RED):** Designed and fabricated PCBs for award-winning rocket missions in ESA's EuRoC competition.
- Web (WebDev):** Maintained a cloud platform using databases like MongoDB to support 700+ students.
- Marketing (Aerospace Week):** Produced video content to promote this event featuring NASA/ESA speakers.

EY Lisbon, Portugal
Student Ambassador Sep 2022 – Jun 2024

- Coordinated communication and event management within a 36-member ambassador team.

Skills & Interests

Technical: Python (PyTorch, TensorFlow, NumPy), MATLAB/Simulink, C/C++, R, RISC V (Assembly), ROS/ROS2, CUDA Acceleration, Docker, Git, LaTeX, KiCad, LTSpice, SolidWorks, JavaScript/HTML/CSS.

Language: Portuguese (Native), English (C1-IELTS).

Certifications: CS50 AI (Harvard, 2025), Automatic Control (TU Delft, 2024), CS50 Computer Science (Harvard, 2020).

Interests: Piano (Grade V), Volunteering (Refood, Web Summit), 3rd in National Biology Olympiad.