

# Renato Loureiro

aerospace engineer

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## contact

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## languages

Portuguese, English  
German (Basic)

## programming

♥  $\text{\LaTeX}$   
Python, C++, C  
Matlab & Simulink 🚀  
JavaScript, html & CSS

## personal projects & contributions

👤 Weather extension  
👤 Positioning in GPS  
👤 BiSOS toolbox  
👤 Article Manager

## other tools

SolidWorks  
Autodesk Inventor  
Git 📦, Linux 🐧

## education

- 2020–2022 **M.Sc.** in Aerospace Engineering, IST, Lisbon, Portugal  
*Thesis: Analysis and Comparison of Iterative Bilinear Sum-of-Squares Region of Attraction Estimation Algorithms*  
Degree with more emphasis into system control, system engineering, computer vision algorithms, optimization, telecommunications and electronics. Relevant grades and achievements:
- Systems Programming 17/20
  - Computer Control 18/20
  - Unmanned Aerial Vehicles 19/20
  - Flight Testing 18/20
- 2021–2022 **Studying abroad**, University of Stuttgart, Germany  
Fully accredited as part of my second year of my master's degree.
- 2017–2020 **B.Sc.** in Aerospace Engineering, IST, Lisbon, Portugal

## experience

### Part Time

- 2022 **Student Assistant**, iFR, Germany  
(6 months) Work in the development of a Matlab toolbox to solve bilinear sum-of-squares optimization problems and study iterative algorithms to estimate the region of attraction of nonlinear systems.

### Student projects

- 2021–2022 **UAV-ART Vision department collaborator**, Aerotéc, Portugal  
Development of computer vision algorithms for UAV applications, mostly feature selection, object identification, point cloud generation, simultaneous localization and mapping.
- 2019–2020 **Formula Student team member**, FST Lisboa, Portugal  
Work in a multidisciplinary project that implies autonomy, responsibility, continuous learning in areas such as project management, manufacturing, product design and CAD modelling.

## volunteering

- August 2018 **Volunteer at the IPHO**, Lisbon, Portugal  
Work as a volunteer at the International Physics Olympiad, being responsible for the Ecuador's team during the competition.

## awards

- 2017–2019 **Academic Merit**, IST, Lisbon, Portugal  
Awarded to students with an excellent performance in their Bachelors.

## interests

**professional:** data analysis, system control, software design, machine learning

**personal:** books, politics, cooking, running