

## EDUCATION

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- **Instituto Superior Técnico - University of Lisbon** Lisbon, Portugal  
*PhD in Electrical and Computer Engineering; GPA: 18/20* *Sept. 2023 – Present*
- **Instituto Superior Técnico - University of Lisbon** Lisbon, Portugal  
*Master's degree in Aerospace Engineering; GPA: 16/20* *Sept. 2018 – 2020*
- **Indian Institute of Technology Madras** Chennai, India  
*Integrated Master in Aerospace Engineering; GPA: 7/10* *Aug. 2018 – Nov. 2018*
- **Instituto Superior Técnico - University of Lisbon** Lisbon, Portugal  
*Bachelor's degree in Aerospace Engineering; GPA: 15/20* *Sept. 2015 – July 2018*
- **Centro de Estudos de Fátima** Fátima, Portugal  
*High School - Science and Technology; GPA: 17/20* *Sept. 2012 – Jun. 2015*

## EXPERIENCE

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- **Instituto de Telecomunicações** Lisbon, Portugal  
*ML/NLP researcher* *Sept. 2023 - Present*
  - **ML/NLP researcher:** Research on structured memories and attention mechanism for natural language generation in the scope of DECOLLAGE project under the supervision of professor André Martins.
- **NTT DATA Europe & Latam** Lisbon, Portugal  
*Assistant Engineer* *Sept. 2022 - Sept. 2023*
  - **Data scientist in optical character recognition project:** End-to-end solution whose purpose refers to the automation of the account opening process for new customers, through the automatic reading of digitized documents and subsequent validation of the information not only between different types of documents but also between documents and a local repository of the client.
- **Institute For Systems and Robotics** Lisbon, Portugal  
*Master's Thesis Intern; GPA: 19/20* *Jul. 2020 - May. 2022*
  - **System identification of mechanical systems using deep learning methods:** Development of physical-aware deep learning architectures for system identification of mechanical systems. The novelty resides on combining discrete variational principles with state-of-the-art deep learning techniques by means of implicit differentiation.
- **Albatroz Engenharia** Lisbon, Portugal  
*Internship* *Jul. 2019 - Sept. 2019*
  - **Hardware:** Implementation of an open glider network node in Castelo Branco aerodrome: construction and programming of a receiver for FLARM/OGN tracker equipped aircraft.
  - **Software:** Development of a support airfield web application for collision prevention and support in aircraft landing based on the receiver installed.

## CERTIFICATIONS

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- **Python for Data Analysis & Visualization 2022** *2022*  
*Udemy*
- **Python A – Z™: Python For Data Science With Real Exercises!** *2022*  
*Udemy*
- **Microsoft Certified: Azure Fundamentals** *2022*  
*Microsoft*
- **Fundamentals of Reinforcement Learning** *2020*  
*Online non-credit course authorized by University of Alberta and offered through Coursera*

- **Machine Learning**

- *Online non-credit course authorized by Stanford University and offered through Coursera* 2020

- **Certificate in Drone Simulation and Control**

- *Instituto Superior Técnico* 2018

## PUBLICATIONS

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- S. Santos, M. Ekal, and R. Ventura. Symplectic momentum neural networks - using discrete variational mechanics as a prior in deep learning. *In Proceedings of The 4th Annual Learning for Dynamics and Control Conference*, volume 168 of *Proceedings of Machine Learning Research*, pages 584–595.
- S. Santos, V. Niculae, D. McNamee, and A. F. T. Martins. Sparse and structured hopfield networks, 2024. arXiv preprint, <https://arxiv.org/abs/2402.13725>

## SKILLS AND INTERESTS

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- **Languages:** C, Python, Matlab, Javascript.
- **Technologies:** MS office tools (Excel, Word, Powerpoint), Sony Vegas, Adobe Photoshop, Solidworks, Autodesk Inventor, Solidedge, Latex
- **Libraries:** PyTorch, Seaborn, Matplotlib, NumPy, Pandas, Scikit-Learn, SciPy.
- **Technical Skills:** Microsoft Azure.
- **Soft Skills:** Critical Thinking, Problem Solving.
- **Areas of Interest:** Avionics, Aeronautics, Space, Control, Electronics, Artificial Intelligence, Machine Learning, Deep Learning, Computer Vision, Natural Language Processing.
- **Other Interests:** Cinema, space, music, technology, sports, photography, nature, traveling.

## LANGUAGES

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Portuguese (mother tongue), English (fluent), French (elementary).