

# João Cardoso

COMPUTER SCIENCE GRADUATE STUDENT

Alameda Campus, Lisbon, Portugal

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## Education

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### Instituto Superior Técnico (IST) - Alameda Campus

Lisbon, Portugal

MASTER IN COMPUTER SCIENCE AND ENGINEERING (MEIC-A)

September 2023 - November 2025

- Specialization in Artificial Intelligence and Language and Information Technologies
- Average Grade: 18/20
- Thesis: "Hybrid Prompt Optimization for Sparse Autoencoder Feature Visualization in Large Language Models"
  - Developed task-specific prompt optimization algorithms for maximizing Sparse Autoencoder latent activations
  - Supervised by Professors Arlindo Oliveira and Bruno Martins
  - Final grade of **20/20**

### Instituto Superior Técnico (IST) - Alameda Campus

Lisbon, Portugal

BACHELOR'S IN COMPUTER SCIENCE AND ENGINEERING (LEIC-A)

September 2020 - July 2023

- Average Grade: 17/20
- Academic Merit Diploma all three years (2020/21, 2021/22, 2022/23)

### Scientific-Humanistic Secondary Education

Portugal

HIGH SCHOOL DIPLOMA

September 2017 - July 2020

- Average Grade: 19.5/20

## Experience

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### Teaching Assistant - Natural Language Processing

Lisbon, Portugal

INSTITUTO SUPERIOR TÉCNICO (IST)

September 2024 - November 2024; September 2025 - November 2025

- Worked as a Teaching Assistant for the Natural Language Processing course in the MEIC-A program.
- Besides in-person teaching, also assisted with test and project grading.

### Research Intern

Lisbon, Portugal

PRIBERAM LABS

February 2024 - July 2024

- Engineered and implemented a machine learning-based live speech transcription system leveraging state-of-the-art open source models.

### Research Intern

Lisbon, Portugal

INESC-ID - HUMAN LANGUAGE TECHNOLOGIES

April 2023 - July 2024

- Conducted research on applying voice conversion techniques to restore historical and degraded audio recordings.

### Course Author

Portugal

TREE TREE2 - AFTERSCHOOL

April 2023 - May 2023

- Co-authored integral calculus course materials for high school students.

### Multimedia Department Member

Lisbon, Portugal

SINFO

May 2022 - May 2023

- Produced and edited promotional materials including images and videos for Portugal's largest free tech conference.
- Was staff during the course of the event.

### Writer & IT Infrastructure Head

Lisbon, Portugal

DIFERENCIAL

December 2020 - March 2023

- Led overhaul of the organization's WordPress website, improving user experience and content management capabilities.
- Authored several journalistic and opinion articles (in Portuguese).

## Awards and Certifications

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**Academic Merit Diploma - MEIC-A**

Instituto Superior Técnico  
2023/24

**Axioms Merit in Optimization and Algorithms**

BEST STUDENT IN THE OPTIMIZATION AND ALGORITHMS MSc COURSE

Instituto Superior Técnico  
2024/25

**Academic Merit Diploma - LEIC-A**

Instituto Superior Técnico  
2020/21, 2021/22, 2022/23

**National Contest in Ethics and Practical Philosophy**

1ST PLACE

APEFP (Portuguese Association of Ethics and Practical Philosophy)

2019

**Certificate of Proficiency in English (CPE)**

C2 LEVEL

Cambridge Assessment English  
2017

## Skills

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**Programming Languages & Technologies** Python, PyTorch, Java, C, JavaScript, SQL

**Areas of Expertise** Machine Learning, Natural Language Processing, Deep Learning, Speech Processing, Data Analysis

**Languages** Portuguese, English (C2 Proficiency)

**Tools & Frameworks** Transformer Lens, SAE Lens, Git, Linux, Docker, WordPress, LaTeX, Image/Video Editing