

# Tiago Miranda

Data Scientist | Data Engineer

@ tiagomiranda.work@gmail.com

in LinkedIn | Website: <https://tiagojosemiranda.github.io>

## Education

- 🎓 **Masters Degree in Engineering and Data Science** - Instituto Superior Técnico, Lisbon, Portugal 2022 – 2024
  - Relevant coursework: Machine Learning, Deep Learning, Natural Language, Multivariate Analysis, Information Systems and Databases, AI and Decision Systems, Processing Big Data.
  - Completed a Masters's Thesis titled *"Using embeddings to infer diagnostics from medical prescriptions"* in collaboration with the research group Social Physics and Complexity Lab achieving a grade of 18/20.
  - Final Grade: 17.4/20
- 🎓 **Bachelor Degree in Engineering Physics** - Instituto Superior Técnico, Lisbon, Portugal 2018 – 2022
  - Relevant coursework: Probabilities and Statistics, Programming, Computational Statistics, Computational Mathematics, Computational Physics, Statistical Physics.

🌐 Languages: fluent in Portuguese (native language) and English (Cambridge Certificate of B2 level) and intermediate level in French (level A2.2).

## Work experience

- Research technician at **Social Physics And Complexity Lab (SPAC) @ LIP** mar/2025 – present
  - Conducted research in the scientific subject of Computational Sciences, Data Science, and Artificial Intelligence applied to health, in the framework of the "HealthDisrupt: A public health tool to monitor the impact of disruptive events in nationwide health diagnoses" project.
  - Participated in the management of databases containing medical and non-medical information; construction and training of models; and the design of tools intended to share knowledge with the public administration.
- First stage researcher (R1) at Social Physics And Complexity Lab (SPAC) @ LIP mar/2022 – sept/2022
  - Conducted research in the scientific subject of Computational Social Sciences in the framework of the EU-funded project "FARE, Fake News and Real People – using big data to understand human behaviour".
  - Analysed retweet cascades to study the spread of ideas on Twitter through the prism of complex networks.
  - Part of a multidisciplinary international team that built a database from urgent care and prescription data.
  - Received a research scholarship by Fundação para a Ciência e Tecnologia (FCT).
- Tutored different subjects to underprivileged kids 2018 – 2023
  - Project developed with Jerónimo Martins' scholarship (2018–2022) and afterwards in a volunteering regime.

## Projects

- </> Is This AI Ripe? - Detection and Ripeness Classification of Bananas using Deep Learning Methods (Python)
  - Implemented a classification system for banana ripening stages using a Convolutional Neural Network with data pre-processed through the YOLOv8 model.
  - Developed a manually curated dataset tracking the progression of banana ripeness over time.
  - Designed and implemented a Graphical User Interface to enhance the project's accessibility for end users.
- </> Insurance premium calculation (Python)
  - Calculation of a fair car insurance premium based on data of previous claim sizes and number of claims as well as in-depth analysis of individuals' risk parameters.
  - Problem solved in the ECMI Modelling Week 2023 held in Szeged, Hungary.
  - Received a scholarship from the university to attend the ECMI Modelling Week to solve the problem at hand as part of an international team.
- </> Other projects include a system that analyzes user entertainment patterns to recommend diverse content, and a video clustering pipeline for Giro d'Italia streaming data - among others showcased on my website.

## Hard Skills

- </> Fluent in programming languages such as Python, R, C, C++. Experienced using Python libraries such as PyTorch, SciKit-Learn, NumPy, Pandas, OpenCV.
- </> Experienced in database management using SQL.

## Accomplishments and awards

- Studied oboe at Conservatório de Música Calouste Gulbenkian for nine years. Performed, solo and in an orchestra, in multiple theatres in Portugal: Casa da Música do Porto, Teatro Circo, Altice Fórum Braga etc.
- Achieved perfect scores in the national exams of 'Maths' and 'Physics and Chemistry' finishing high school with an average of 19.5/20.