

# Tiago Miranda

Data Scientist | Data Engineer

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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: 17/20
- 🎓 **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.
  - Final Grade: 14/20

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

## Work experience

- 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 AlRipe? - 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.
  - The project assists users in planning their fruit consumption by predicting when a banana will reach the desired ripeness stage, thus reducing the chance of consuming it after it becomes suitable.
- </> 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 tracks users' entertainment consumption patterns and recommends diverse content to broaden their horizons, a Video segmentation (clustering) pipeline of Giro d'Italia streaming data etc. that can be seen 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, completing level 5.
- Composed and 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.