

Jorge Cebola Borbinha

✉ jborbinha9@gmail.com

☎ +351 967 621 809

📍 Lisboa, Portugal

🌐 /jorge-borbinha.github.io

in /jorgeborbinha

🐙 /jorge-borbinha

Results-driven Analyst & Quantitative Researcher with background in Biomedical & Physics Engineering with 7+ years of experience in data handling, visualization and statistical analysis.

Strong programming expertise in Python, SQL, FORTRAN and C++, with hands-on experience in data analysis libraries and proficient in technical communication.

Experience

Research Fellow, Centre for Nuclear Sciences and Technologies (C2TN), Instituto Superior Técnico

2020 - 2025

- ✓ Developed and implemented pipelines/scripts for **data extracting, transforming and loading (ETL)** and **visualization** of **very large datasets** (more than 20M datapoints) in the scope of medical imaging/therapy (python, SQL and Excel) – demonstrated proficiency in **data integrity/processing** and optimized generation of human voxel model (i.e. 3D human-like representations);
- ✓ Applied **statistical and computational models** (e.g. **Monte Carlo simulation, time series processing**) to simulate personalized dosimetry for radiation therapy;
- ✓ Built **dashboards** to streamline presentation of data insights and project conclusions, employing python (plotly, seaborn) and Excel.

Research Fellow, Instituto de Plasmas e Fusão Nuclear, Instituto Superior Técnico

Project FRIENDS (Fleet of dRones for radlological inspEction, commuNication and reScue)

2019 - 2020

- ✓ Developed python scripts, leveraging **statistical and computational models** (e.g. Monte Carlo simulation, regression), to locate and identify radiation sources in northern Portugal from drone scouting;
- ✓ Analyzed technical datasets using python/MATLAB and **advanced Excel**.

Research Fellow, C2TN, Instituto Superior Técnico

2018 - 2019

- ✓ Developed **automated FORTRAN pipeline** for data ETL, which centralized human voxel model generation – enhanced user experience for new students/researchers and reduced manual workload;
- ✓ Created FORTRAN **software for data manipulation and analysis**, i.e. automatically modify the volume of organs in a standard human voxel model – revealed underestimation of radiation doses in standard models, improving accuracy in research.

Skills

- ✓ **Programming:** Python (NumPy, pandas, plotly, matplotlib, seaborn, scikit-learn, scipy), SQL, C++, FORTRAN;
- ✓ **Data Analysis:** Data wrangling, ETL, Probability & Statistics, Data Visualization, Machine Learning;
- ✓ **Technical Tools:** Monte Carlo simulation, Excel (advanced), PostgreSQL, Linux command line, Prompt engineering (e.g. ChatGPT, Gemini, Perplexity);
- ✓ **Communication/Adaptability:** Wrote scientific articles/reports, presented at international conferences (**translated complex data and data-driven insights into actionable recommendations** for diverse audiences), collaborated in national/international projects and conference organization (handled logistics/marketing/outreach);
- ✓ **Other:** R, MATLAB, Object-oriented programming.

Education

Advanced Studies Diploma Physics Engineering

Instituto Superior Técnico, Universidade de Lisboa

2024

DEV210x : Introduction to C++

Certification in Microsoft Corporation (certificate)

2018

MSc Biomedical Engineering

Faculdade de Ciências e Tecnologia, Universidade NOVA de Lisboa

2017

Honors & Awards

European Radiation Dosimetry Group Young Scientist Award

2023

Fundação para a Ciência e Tecnologia PhD Grant Recipient

2020

Languages

- ✓ Portuguese: C2
- ✓ English: C2
- ✓ Spanish: B2



Interests

- ✓ History;
- ✓ Cooking;
- ✓ Finance.