Jorge Cebola Borbinha

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Results-driven Analyst & Quantitative Researcher with background in Engineering and 7+ years of experience transforming complex scientific data into actionable insights. **P**roven expertise in Python, SQL, FORTRAN and C++, with hands-on experience in data analytics/visualization libraries and proficient in technical communication. My personal webpage where I showcase my projects: jorge-borbinha.github.io.

Looking to apply my skills towards solving business challenges and driving data-informed decision making.

Experience

Research Fellow, Centre for Nuclear Sciences and Technologies (C2TN), Instituto Superior Técnico   2020 - 2025

✓ Designed/implemented python pipelines/scripts to process and visualize large-scale medical imaging datasets (more than 20M datapoints) – reduced data wrangling time and optimized the generation of complex human-like 3D models.

✓ Collaborated with health industry stakeholders to build dashboards, employing python and Excel – translated data insights about medical physics and performance indicators into clear, actionable data visualizations;

✓ Engineered statistical analysis workflows in Python and Excel to process and interpret raw simulation and measurement data, yielding key insights/trends that guided research strategy in personalized radiation therapy.

Research Fellow, Instituto de Plasmas e Fusão Nuclear, Instituto Superior Técnico   2019 - 2020
Project FRIENDS (Fleet of dRones for radIological inspEction, commuNication anD reScue)

✓ Coordinated with regulatory bodies and radiation industry partners to define operational protocols and ensure legislative compliance for radiological field exercises.

✓ 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 data.

✓ Conducted radiation detector performance analysis and generated technical datasets using Python/MATLAB and advanced Excel functions.

Research Fellow, C2TN, Instituto Superior Técnico   2018 - 2019

✓ Collaborated with health industry professionals to define protocols towards more effective measurement and image data acquisition.

✓ Developed FORTRAN ETL pipelines and analysis tools to centralize human voxel model generation and manipulate organ volumes in voxel models – significantly reduced manual workload for researchers/collaborators, quantified significant radiation dose underestimations in standard models and improved research accuracy.

Skills

✓ **Programming:** Python (NumPy, pandas, plotly, matplotlib, seaborn, scikit-learn, scipy), SQL, C++, FORTRAN;

✓ **Data Analysis:** Data wrangling, 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/sponsors/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
Master 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.