

## Personal info

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**Online presence:** GitHub, LinkedIn; **Location:** New York City

## Work Experience

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### Futurae

Since July 2023

*Senior Data Scientist (Software Engineer & Data Analyst until March 2024)*

- Developed dashboards—using Spark and GCP—that provided client and end-user activity insights in a system with 1M+ users.
  - Enabled the CPO to make data-driven decisions and empowered the customer success team to retain at-risk clients, achieving near-zero churn.
- Pioneered a fraud-detection PoC, achieving goals 50% ahead of schedule and securing 100% external validation for 10+ identified fraud cases, leading data analysis to uncover fraudulent patterns.
- Onboarded and mentored new members, as the anti-fraud team grew from 2 to 7 members.
- Co-designed and implemented a real-time pipelines with Pub/Sub, Beam (Dataflow), and GCS/BigQuery, reducing latency from 24 hours to minutes and improving data quality and integrity.
- Drove key improvements during the migration of dashboards, consolidating data previously spread across +5 sources into a single platform.
  - This centralized approach more than doubled the number of users able to access the necessary data, while maintaining strict security standards.

### EU Tax Observatory

April 2022 – April 2023

*Data Scientist (Research Assistant for the first 5 months)*

- Created an open-source Python tool that compiled a public dataset of 200+ reports on the global allocation of productive inputs, revenue, profits, and taxes by over 100 multinational enterprises (average revenue of \$30B+). Conducted data analysis in R and produced reproducible research.
- Built—with Python and Elasticsearch—a tool to search keywords across 2TB+ of leaked documents, improving data accessibility and productivity for researchers, by reducing search time from hours to seconds.

### Priberam

March 2021 – July 2021

*Junior Software Engineer*

- Overhauled the orchestration module—built with C# and RabbitMQ—of a large-scale commercial application, enabling automated media processing workflows for 100+ languages.
  - Replaced a sequential workflow with directed acyclic graphs, enabling parallel execution and reducing processing time by 80% in highly concurrent workflows.

### Adelard LLP

March 2020 – December 2020

*Consultant*

- Assessed Control and Instrumentation systems for the Hinkley Point C nuclear power station by engineering a MATLAB/Simulink simulation process and managing version control in a collaborative environment with 5+ developers.

## Education

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### ENPC / Paris School of Economics

2021 – 2022

*MSc in Economic Decision and Cost-Benefit Analysis (16/20)*

- **Master's Thesis:** Shifts and Profits within Multinationals and across Jurisdictions
- **Relevant coursework:** Risk (20/20), Cost-Benefit Analysis (19/20), Econometrics and Data Analysis (18/20).

### KU Leuven

2017 – 2019

*MSc in Computer Science, Magna Cum Laude*

- **Master's Thesis:** Implicit Type Conversions
  - Extended the KUL Haskell Compiler to support transitive, parametric, and locally scoped implicit type conversions.
- **Relevant coursework:** Data Mining (19/20), Formal Systems and Their Applications (19/20).

### Universidade de Lisboa - Instituto Superior Técnico

2013 – 2017

*BSc in Applied Mathematics and Computation, with Distinction (15/20)*

- **Relevant coursework:** Numerical Analysis (19/20), Object-Oriented Programming (18/20).

## Skills

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| <i>Programming</i> | Python, Scala, C#, R, Haskell, Java                  |
| <i>Data Eng</i>    | Beam, Spark, Avro, git, GitLab/GitHub CI/CD          |
| <i>Data Sci</i>    | SQL, pandas, Keras, scikit-learn, NumPy              |
| <i>GCP</i>         | BigQuery, Pub/Sub, Dataflow, Dataproc, Cloud Storage |
| <i>Others</i>      | Docker, Linux, Quarto, JIRA, Confluence              |
| <i>Languages</i>   | Proficient in Portuguese and English                 |

## Soft skills

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Advocate for direct, transparent communication and to-the-point discussions, while maintaining a friendly tone and a touch of humor.

## Side Projects

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- Developed (with Python, Github and Jekyll) Açores.net, a platform providing analytical insights and automated daily RSS updates on the activity of the Azorean government.
- Launched INE-updates, a website tracking daily updates and newly introduced indicators from INE/Statistics Portugal, featuring open-source analyses.