

José Pedro Fonte

SOFTWARE ENGINEER · AI/ML ENGINEER

📍 Portugal

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Personal Profile

I'm currently leading the development of Explore's Agent Harness @ Promptly Health, where I work on harnessing the full potential of LLMs in the medical data domain.

I'm completing an MSc in Software Engineering (Universidade do Minho & LMU Munich, thesis in progress), and what drives me is taking products from idea to production in fast-moving teams working at the technology frontier.

I'm most curious about Applied AI/ML, Robotics, Product Design, and Distributed Systems. Outside work you'll find me lifting, running, travelling, out in nature, or deep in podcasts, music, and cinema - always keeping an eye on what's next in tech.

Work Experience

Promptly Health

AI/ML Engineer | Full-Time

Portugal, Remote

Mar 2025 - Present

- **Building Explore (Promptly's flagship product):** Lead and solo developer of the AI backend for Promptly's platform to explore, visualize and query medical databases with agents — first MVP shipped in 3 months with a core team of 3.
- **Impact:** Highly successful MVP led to currently being deployed across Promptly's Data Partner network — Ribera Salud, NHS Newcastle, ULS Coimbra, and counting.
- **Now building:** SPMS contract building a platform for Portuguese clinicians (features Data Navigation, Risk Monitoring, Patient Tracking).
- **Core focus:** AI in production - agent harnesses, tool design, RAG, observability, evaluations, and team working on post-training models (NER, Emotional Analysis, Embeddings).
- Started part-time (Mar–Sep 2025, alongside my MSc thesis) working on existing projects (incorporating Observability and Evaluations, optimizing Agent Workflows, improving API reliability).
- **Technical Skills:** Python, FastAPI, Agno, OpenRouter, Langfuse, QdrantDB, OMOP CDM, PostgreSQL, Docker, Git/GitHub, Coding Agents
- **Soft Skills:** Product Ownership · Product Vision · Fast Learning & Prototyping · Communication with Stakeholders · Research · Documentation

Promptly Health

AI/ML Engineer Intern | Summer Internship

Portugal, Remote

Jun 2024 - Aug 2024

- Worked as an AI/ML Engineer, solo and high agency.
- Project: Chat to DB | Agent to interact with Medical Databases.
- Researched, documented, developed and measured multiple PoCs with different SoTA approaches.
- Developed an MVP with Streamlit.
- **Technical Skills:** Docker, PostgreSQL, ChromaDB, Python, LangChain, Ollama, HuggingFace, Streamlit
- **Soft Skills:** Independence · Time Management · Organization · Research & Documentation · Presentation Skills

Colégio João Paulo II

Assistant Professor of Robotics | Freelance

Braga, Portugal

Sep 2021 - Jun 2024

- Taught 2x week a robotics extracurricular class to kids from the 1st to 9th grade.
- Goals for the class: logical thinking, computers, electronics and code basics.
- **Technical Skills:** Scratch, LEGO Mindstorms, MicroBit, Arduino, Bot'n Roll
- **Soft Skills:** Teamwork · Leadership · Time Management · Communication · Teaching · Planning

SNUGLAR

Full-Stack Developer | Summer Internship

Portugal, Remote

Jul 2023 - Sep 2023

- Built a Jira Marketplace app in a team of 4 interns to provide more functionalities to JIRA Issues.
- Worked throughout the whole stack.
- **Technical Skills:** MongoDB, NodeJS, Express, React, Atlassian Design System, Git/Gitlab
- **Soft Skills:** Teamwork · Time Management · Communication · Problem-Solving · Fast Learning · AGILE

CodeVision

Full-Stack Developer | Summer Internship

Portugal, Hybrid

Jul 2022 - Sep 2022

- Project: internal platform to manage international partners.
- Entered the “production line” of a real product being built.
- Worked with .NET stack.
- **Technical Skills:** C#, .NET Framework, SQL, Azure, Git
- **Soft Skills:** Teamwork · Time Management · Communication · Adaptability · AGILE

CAVN

Factory Worker | Summer Job

Barcelos, Portugal

Jul 2019 - Aug 2019

- Worked on the production-line of a ceramics factory.

CAVN

Factory Worker | Summer Job

Barcelos, Portugal

Sep 2018 - Aug 2018

- Worked on the packaging-line of a ceramics factory.
- My first summer job as a High-School student.

Education

Ludwig-Maximilians-Universität München

MSc in Software Engineering | ERASMUS Exchange

Munich, Germany

Sep 2024 - Aug 2025

- Exchange Year at one of Germany’s top universities, LMU Munich.
- **Courses:** Deep Learning and Artificial Intelligence, Machine Learning, Automated Machine Learning, German Language Courses A1.1 · A1.2.
- **MSc Thesis:** “VLM Training – Unified Internal Rewards in GRPO” supervised by Dr. Yunpu Ma (LMU) and PhD Student Jinhe Bi (LMU/Huawei).

Universidade do Minho

MSc in Software Engineering

Braga, Portugal

Sep 2023 - Aug 2025

- The first year of my master’s was a combination of some broad courses and then specialization on my main interests: Distributed Systems, Software Development (Mobile & Web) and Product Design.
- **Distributed Systems Courses:** Paradigms of Distributed Systems | Large Scale Distributed Systems | Fault Tolerance
- **Software Engineering Courses:** Mobile Software Development | SW Analysis, Transformation and Testing | Data Science for SW Engineers
- **Other Relevant Courses:** High Performance Computing, AI & ML, Cloud Applications and Services, Software Development, Network Services Engineering
- **Technical Skills:** OpenMP, MPI, CUDA || Jupyter Notebooks, NumPy, Pandas, Scikit-learn, Seaborn, Matplotlib, TensorFlow, Keras || Ansible, Docker, GCloud, GKE || React & React UI Libs || Golang, Wireshark, ffmpeg || Java Reactive gRPC, ZeroMQ, Erlang, Maelstrom || Java (Android), React Native || Documentation (LaTeX, Typst)

Universidade do Minho

BSc in Software Engineering

Braga, Portugal

2020 - 2023

- Finished my BSc in Software Engineering and proceeded to an MSc in Software Engineering in order to deepen my knowledge in Distributed Systems, Software Development & Design and AI, ML & Data Science.
- The Bachelors degree had a project-based learning approach, so most of the subjects included a project, which made me develop the ability to design, build and test applications in a dynamic, collaborative and high-pressure environment.
- **Relevant Courses:** Functional Programming, Imperative Programming, Object Oriented Programming, Algorithms and Complexity, Operating Systems, Distributed Systems, Databases, Computer Networks & Communications, Compilers & Language Parsers, Artificial Intelligence, Machine Learning.
- **Technical Skills:** Java, Python, MySQL, C/C++, C#, Haskell, MatLab, Knime.

Universidade do Minho

BSc in Mechanical Engineering

Braga, Portugal

2019 - 2020

- Spent one year studying Mechanical Engineering and decided to change degrees to Software Engineering.
- **Relevant Courses:** Calculus I, Calculus II, Linear Algebra, Material Science I, Material Science II, Technical Drawing, 3D Modelling/CAD

Volunteer Experience

IEEE Student Branch UMinho

Collaborator of Program Committee

Braga, Portugal

2023 - 2025

- Helped organize workshops, talks and other events targeted at the engineering academic community.
- Led some technical workshops on SW Eng topics (Git/GitHub, Python, etc).

- Helped organize social events for the student community around the informatics department.

CoderDojo Braga

Mentor

Braga, Portugal

2023 - 2024

- CoderDojo is a voluntary organization with the goal of teaching informatics to young kids and teens.
- Taught Scratch, Python and Web Technologies to Ninjas at CoderDojo Braga.

Projects

Personal Website

Side-Project

Braga, Portugal

2024

- **Github Repo | Website**
- In this project I wanted to create a minimalist website to showcase my work experience, education, personal projects and some photos.
- Hosted on Vercel and built with NextJS, shadcn/ui, Tailwind.
- **Technical Skills:** TypeScript, NextJS, Vercel, React, shadcn/ui, Tailwind.

University Projects

Universidade do Minho

Braga, Portugal

2020-2024

- **Github Repository Link**
- All my university projects are organized in a github repository, some of the most relevant:
- **Web**
 - ProbUM: Led a group of 15 people on an Exam Solving Platform with micro-services architecture. (React, Java + MySQL, NodeJs+Mongo)
 - Fairthos: Online Fairs Platform. (C#, .Net, MySQL)
- **Mobile**
 - BraGuia (Android): Android app with guides for the city of Braga. (Java)
 - BraGuia (Cross-Platform): Same app in React Native. (React Native)
- **Networks and Operating Systems**
 - DNS System: DNS System with hierarchical and distributed DBs. (Python)
 - File Compression System: OS system calls to compress files in a server-client architecture. (C)
 - Video Streaming Service: OTT network for content delivery. (Golang, ffmpeg)
- **Distributed Systems**
 - Ride-Sharing Service: Server-Client architecture with concurrency and state management. (Java)
 - Album-Sharing Service: Client (CRDTs, ZeroMQ, Java), Central Server (Erlang) and Data Server (DHTs, Java Reactive gRPC), each implementing different distributed structures.
 - Extension on Raft Algorithm: extending Raft Consensus algorithm with Epidemic Propagation. (Python, Maelstrom)
- **AI, ML and Data Science**
 - Car Racing: Advanced Search Algorithms in a Racing Game. (Python)
 - Spotify Tracks and Solar Panels Dataset: Data Visualization, Preparation, Model Training and Value Prediction. (Python)
 - Rent and Obesity Dataset: Data Visualization, Preparation, Model Training and Value Prediction. (Knome)
- **Other relevant Projects**
 - High Performance Computing: optimizing a physics simulation from 200 sec to 1.5 sec. (OpenMP, MPI, CUDA)
 - Pacman Game: Designing and Implementing a game. (Haskell)
 - Smart House: Smart-Devices management system in OOP. (Java)

Skills

Programming

Python, Java, JavaScript, TypeScript, C/C++, C#, Golang, React, Tailwind, MongoDB, MySQL, NoSQL

Miscellaneous

Linux, Shell (Bash/Zsh), LaTeX (Overleaf, Markdown), Microsoft Office, Git/GitHub, Figma Design, Adobe Creative Suite.

Soft Skills

Team Leading, Teamwork, Problem-solving, Research, Ownership, Documentation, Communication, Presentation.

Languages

Portuguese

Native Speaker

English

Advanced Speaker proficiency | Cambridge C1, B2 and B1 Certificates

German

Beginner Speaker | A1.1 & A1.2 IUCM Certificates