

Simão Pedro Sá Cunha

PhD Student in Informatics

Date of Birth: January 7th, 2001

Location: Vila Nova de Famalicão - Braga, Portugal

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EDUCATION

• Doctoral Program in Informatics (PhD)

University of Minho, Braga, Portugal

2025 - Present

• Informatics Engineering (Integrated Master's)

University of Minho, Braga, Portugal

2019 - 2024

• Basic and Secondary Education

Escola Cooperativa Vale S. Cosme - Didáxis, Vila Nova de Famalicão, Portugal

2012 - 2019

WORK EXPERIENCE

• Teaching Assistant

University of Minho

Braga, Portugal

– Courses taught:

- * Topics of Software Development
- * Experimentation in Software Engineering

• Summer Internship

Bosch Portugal

Jul - Sep 2023

Braga, Portugal

- Applied machine learning and deep learning techniques to develop a system for detecting delaminations.
- Implemented machine learning models using Python libraries such as Scikit-learn (Sklearn) and deep learning models using Deep Learning Halcon by MVTEC to build robust detection algorithms.
- Conducted image processing tasks using Halcon from MVTEC to enhance data preprocessing.
- Contributed to internal software development projects.
- Gained foundational knowledge in computer vision.

• Summer Internship

Accenture Portugal

Jul - Aug 2022

Braga, Portugal

- Introduction to Google Cloud Platform.
- Data Fusion instance creation and JSON file upload with a customized pipeline configuration in a Cloud Build file written in YAML.
- Agile Scrum Methodology applied in the entire internship.

LANGUAGES

Portuguese: Native

English: C1 - Advanced

SKILLS

Programming Languages: C, Java, JavaScript, Python, Haskell

Frontend Frameworks: React Native

Energy Monitoring: Intel RAPL

Cloud and DevOps: Google Cloud Platform, Firebase, Docker, Ansible

Business Intelligence: Microsoft PowerBI

Research Interests: Large Language Models, Machine Learning, Green Software

PUBLICATIONS

- Luís Cruz, João Paulo Fernandes, Maja Hanne Kirkeby, Silverio Martínez-Fernández, June Sallou, Hina Anwar, Enrique Barba Roque, Justus Bogner, Joel Castaño, Fernando Castor, Aadil Chasmawala, Simão Cunha, Daniel Feitosa, Alexandra González, Andreas Jedlitschka, Patricia Lago, Ana Oprescu, Pooja Rani, João Saraiva, Federica Sarro, Raghavendra Selvan, Karthik Vaidhyanathan, Roberto Verdecchia, Ivan P. Yamshchikov, & Henry Muccini. 2025. **Greening AI-enabled systems with software engineering: A research agenda for environmentally sustainable AI practices**. arXiv. <https://arxiv.org/abs/2506.01774>
- Simão Cunha, Luís Silva, João Saraiva, and João Paulo Fernandes. 2024. **Trading Runtime for Energy Efficiency: Leveraging Power Caps to Save Energy Across Programming Languages**. *Proceedings of the 17th ACM SIGPLAN International Conference on Software Language Engineering (SLE '24)*, October 20–21, 2024, Pasadena, CA, USA. ACM, New York, NY, USA, 13 pages. <https://doi.org/10.1145/3687997.3695638>
- Luís Maia, Marta Sá, Inês Ferreira, Simão Cunha, Luís Silva, Paulo Azevedo, and João Saraiva. 2024. **On the Impact of PowerCap in Haskell, Java, and Python**. *RAW'24: 3rd Workshop on Resource Awareness of Systems and Society*, July 02–05, 2024, Maribor, Slovenia. <https://ceur-ws.org/Vol-3867/paper4.pdf>

CERTIFICATES

•Symposium on Sustainable IT Systems (SUITs)

DIREC & NNF & Roskilde U. & CPH U. & SDU & IT-Univ. & TUD & Aalborg U.

Set 2025

Copenhagen, Denmark

– Attendance Certificate

•CECAM-Lorentz workshop "Greening AI with Software Engineering"

CECAM-HQ EPFL

Feb 2025

Lausanne, Switzerland

– Attendance Certificate

•Cerciras Training School 2024

University of Klagenfurt

Aug 2025

Klagenfurt, Austria

– Attendance Certificate

•1st UMinho Research & Innovation Open Days 2024

University of Minho

Jan 2024

Braga, Portugal

– Pitch Session Certificate

– Poster Session Certificate

•Sustainable Summer School 2023

University of Coimbra

Jul 2023

Coimbra, Portugal

– Attendance Certificate

– Students Workshop and Poster Session Certificate

•English C1

BabeliUM

Oct 2021

Braga, Portugal

– Certificate