

# Simão Pedro Sá Cunha

PhD Student in Informatics

Date of Birth: January 7<sup>th</sup>, 2001

Location: Vila Nova de Famalicão - Braga, Portugal

 simaocunha71

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## EDUCATION

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### • 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

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### • 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

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**Portuguese:** Native

**English:** C1 - Advanced

## SKILLS

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**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

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- 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

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**•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