Simão Pedro Sá Cunha

MSc in Informatics Engineering

Date of Birth: January 7th, 2001   Location: Vila Nova de Famalicão - Braga, Portugal

in simaocunha71   simaocunha71   ✉ simaopscunha@outlook.pt   ⊕ simaocunha71.github.io

EDUCATION

•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   *Feb 2025 - Present*
University of Minho   Braga, Portugal

- Courses taught:
  * Topics of Software Development
  * Experimentation in Software Engineering

•Informatics Teacher   *Mar 2025 – Jun 2025*
Requião Primary School and Vale S. Martinho Primary School   Vila Nova de Famalicão, Portugal

- Taught IT basics to 2nd, 3rd, and 4th grade students using Microsoft PowerPoint and Word
- Taught programming basics with the Scratch platform

•Summer Internship   *Jul - Sep 2023*
Bosch Portugal   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   *Jul - Aug 2022*
Accenture Portugal   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, C++, Java, JavaScript, Python, Haskell, Prolog
Frameworks: React Native
Web Development Tools: Node.js, VSCode, Git, GitHub
Cloud and DevOps: Google Cloud Platform, Firebase, Docker, Ansible
Databases: SQL, MySQL
Business Intelligence: Microsoft PowerBI
Areas of Interest: Large Language Models, Machine Learning, Green Software, Image Processing, Computer Vision

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)** *Set 2025*
  DIREC & NNF & Roskilde U. & CPH U. & SDU & IT-Univ. & TUD & Aalborg U. Copenhagen, Denmark

  – Attendance Certificate

- **CECAM-Lorentz workshop "Greening AI with Software Engineering"** *Feb 2025*
  CECAM-HQ EPFL Lausanne, Switzerland

  – Attendance Certificate

- **Cerciras Training School 2024** *Aug 2025*
  University of Klagenfurt Klagenfurt, Austria

  – Attendance Certificate

- **1st UMinho Research & Innovation Open Days 2024** *Jan 2024*
  University of Minho Braga, Portugal

  – Pitch Session Certificate
  – Poster Session Certificate

- **Sustrainable Summer School 2023** *Jul 2023*
  University of Coimbra Coimbra, Portugal

  – Attendance Certificate
  – Students Workshop and Poster Session Certificate

- **English C1** *Oct 2021*
  BabeliUM Braga, Portugal

  – Certificate