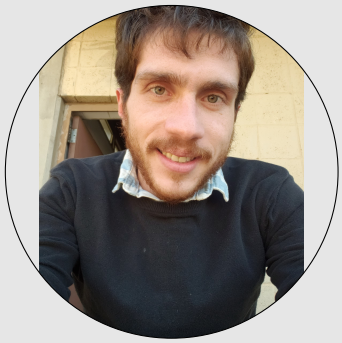
Alexandre **Mascarenhas**

Msc. Computer Science



About me

Hello! I am Alexandre Mascarenhas, I love technology and the integration of software and hardware. I would like to apply this knowledge in industry, especially in challenging projects that involve all the stages of inventing a product.

Personal

Aexandre Mascarenhas
Nationality: Brazilian
1996

Areas of specialization

Embedded systems • Software engineering • Evolutionary computation • Hardware design • Hardware maintenance

Interests

Embedded Systems / IoT
Software Engineering / Data Science / Algorithm Design
Research / Linux

Tools and Environments

Linux / Git / VsCode / Nano / Python Notebook / Proteus / EagleCAD

Hobbies

Skateboarding / Bike / Soccer / Music / Travelling

mascarenhasav
mascarenhasav42
Alexandre Mascarenhas

Work Experience

2023– **Research Assistant**
Embedded Engineer · Sony Computer Science Labs, Japan
Description: Development of a COVID-related detection and prediction device 19. Using an ARM processor with embedded Linux and local processing in C++ and Python
Achievements: The device is in the process of being patented

2022– **Research Assistant**
Computer Vision · University of Tsukuba, Japan
Description: The research uses neural networks (Unet) and subsequent data processing on digital raw images in order to estimate some characteristics and determine rates of plant growth
Achievements: The project improved fruit evaluation and collection by 60 per cent compared to the previous method

2017–2022 **Development Technician**
Embedded Systems · Sao Paulo Metro, Brazil
Description: Development of a device capable of acquiring data from assets in the field, analyzing them locally and sending the information to a central server for further analysis and predictive maintenance
Achievements: The device was patented and in 2022 the device was responsible for saving the company 8 million in maintenance costs

Degrees

2024 **Msc Computer Science**
Evolutionary Computing · University of Tsukuba

2021 **Bsc Phyics**
Computation Emphasys · University of Sao Paulo

2021 **Bsc Electrical Engineering**
Electronic Emphasys · Cruzeiro do Sul University

Programming

PYTHON	5 yrs
C/C++	4 yrs
HTML, CSS	2 yrs
MATLAB	2 yr
VHDL	1 yr
JS, PHP	1 yr
SQL	1 yr

Certificates & Awards

2022 **CollaboTICS 2022 Workshop** issued by Université Grenoble Alpes, France
2020 **Python and Spark for Big Data and Machine Learning** issued by 4Linux Brasil
2015 **Medal of Excellence in Industrial Electronics** issued by Worldskills competition
2013 **Bronze Medalist** Issued by OBMEP - Brazilian Public School Mathematics Olympiad, Brazil

Publications

2024 "*Novel Genotypic Diversity Metrics in Real-coded Optimization on Multi-modal Problems*", in IEEE WCCI CEC (Submitted)
2023 "*AbCD: A component-wise adjustable framework for dynamic optimization problems*", in ACM GECCO
2023 "*Skateboarding stance and handedness: A brief analysis of relationship, proportions and influences*", in: *Arxiv*

Languages

English	● ● ● ● ○	Professional
Spanish	● ● ○ ○ ○	Basic
Portuguese	Native	

Projects

2023 AbEC - **A**djusta**b**le **E**volutionary **C**omponents. A framework to research and Development in Evolutionary Computation. **Link:** https://abec-ec.github.io
2020 **Metro Data Logger (MDL)**. A review of the smart data collector for subway railway systems (PORTUGUESE). **Link:** MDL
2020 **Terminaltor**. A browser-based terminal just for fun. **Link:** Terminaltor

Alexandre Mascarenhas mascarenhasav@gmail.com Tsukuba, JP +81 080 783 46000
https://mascarenhasav.github.io/