Matheus Torquato

Where to find me

Swansea, Wales
United Kingdom
Matheusft@gmail.com

Expertise

Artificial Intelligence, Machine Learning, Data Science, Data Mining, Embedded Computing, Digital Systems, Reconfigurable Computing and Human-Computer Interaction.

Skills

Python, MATLAB, TensorFlow, Scikit Learn, Pandas, NumPy, SciPy, Version control systems, Translating complex scientific concepts to non-experts, Proactivity, Organisation, Communication, Responsibility and Discipline

Languages
English
Portuguese

Summary

BEng and MSc in Computer Engineering. Two years of experience in applying Machine Learning to manufacturing processes. Expertise in scientific and applied research in the topics of Artificial Intelligence, Data Science, Embedded Computing, Digital Systems and Human-Computer Interaction. Well-developed skills employing scientific methods through experimental design, exploratory data analysis and hypothesis testing. Enthusiastic about utilising novel analytical approaches to address real-world challenges and improve commercial outcomes with data. Looking to learn on a daily basis, knowledge is never too much.

Experience

2018 - Now   **ASTUTE 2020**   Swansea, UK
Project Assistant (Machine Learning) - June to Now
- Leading the development of projects involving machine learning, data science, computer vision and optimisation.
- Designing regression, classification and predictive models for processes in the Welsh manufacturing sector.
- Delivering actionable insights from industrial datasets focusing on supporting managerial informed decisions.
- Writing collaborative technical project proposals, specifying data and engineering requirements.

2015 - 2015   **Tata Steel**   Port Talbot, UK
Process Control Engineering Trainee - September to October
- Developed a mobile app (VB programming language) for logging field measurements, previously performed manually.
- Collaborated in the selection of power metering devices for updating the company's high voltage substation network.

2014 - 2014   **Petrobras**   Natal, Brazil
Engineering Intern - March to May
- Assisted in the final stage of a Programmable Logic Controller ladder code development

2014 - 2014   **National Institute for Space Research (INPE)**   Natal, Brazil
Engineering Intern - January to March
- Coded a frequency-based signal detecting software (MATLAB) used by low altitude satellites.

Education

2016 - 2017   **MSc** Computer Engineering   UFRN - Natal, Brazil
Final Mark: 10/10 | Included a period in the SMART Lab (Ottawa, Canada) as a visiting researcher.

2014 - 2015   **One Year Abroad** Computer Science   Swansea University - Swansea, Wales, UK
Final Mark: 7.1/10 | Scholarship awarded from the Science Without Borders Programme.

2010 - 2015   **BEng** Computer Engineering   UFRN - Natal, Brazil
Final Mark: 9.6/10 | Result among the top 0.15% highest in the history of this undergraduate course.

Awards

| 2017 | **Emerging Leaders in the Americas Program (ELAP)** | Canada |

Scholarship targeting the development of high-impact human capital and the next generation of leaders in the Americas.

| 2016 | **3rd Place - Intel Embedded Systems Competition 2016** | João Pessoa, Brazil |

Development of a tactile glove device built using an Intel Galileo Board and additional peripheral electronics.

| 2016 | **Academic Merit Medal** | UFRN, Natal, RN, Brazil |

Honour to whom achieves the highest overall graduation mark.

| 2015 | **BBC University newsHACK Challenge** | Cardiff - Wales |

Won the category "Deliver the news" after proposing a personalised News experience that was shaped according to user's preferences.

| 2014 | **1st Place - Maker Competition 2014** | Swansea University, Swansea - Wales |

Best project in an annual competition held by Swansea University Computer Science department. The project used hardware boards (Arduino and Raspberry Pi) to build a wireless automated house powered by software written in Java, C and Python languages.

Important Publications

| 2020 | **Journal Paper (Under Development)** | |

Convolutional Neural Network Applied to SARS-CoV-2 Sequence Classification.

| 2020 | **Journal Paper (Under Review)** | Nature |

Evaluating the burden of COVID-19 in Bahia, Brazil: A modeling analysis of 14.8 million individuals..

| 2020 | **Journal Paper (Under Review)** | Journal of Intelligent Manufacturing |

Multi-objective Optimisation of Electric Arc Furnace Using the NSGA-II Evolutionary Algorithm.

| 2020 | **Journal Paper** | Sensors |

Proposal of the CAD System for Melanoma Detection Using Reconfigurable Computing..

| 2019 | **Journal Paper** | Sensors |

Proposal of the Tactile Glove Device.

| 2019 | **Journal Paper** | Microprocessors and Microsystems |

A parallel implementation of sequential minimal optimization on FPGA.

| 2019 | **Journal Paper** | Circuits, Systems, and Signal Processing |

High-Performance Parallel Implementation of Genetic Algorithm on FPGA.

| 2019 | **Journal Paper** | EEE Access |

Parallel Implementation of Reinforcement Learning Q-Learning Technique for FPGA.

| 2016 | **Journal Paper - (Honorable Mention)** | CHI 2016 |

Emergeables: Deformable Displays for Continuous Eyes-Free Mobile Interaction.

Additional Activities

| 2020 | **Online Course** | Udemy |

Quantitative Finance & Algorithmic Trading in Python

| 2018 | **Online Course** | University of Michigan - edX |

Introduction to User Experience