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** IEEE 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