Matheus **Torquato**

Computer Engineer, MSc.

Contact

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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, Wales, 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 different processes in the Welsh manufacturing sector.
- Delivering actionable insights from industrial datasets focusing on supporting managerial informed decisions.

2015–2015 **Tata Steel** Port Talbot, Wales, 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, RN, 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, RN, Brazil
Engineering Intern - January to March
- Coded a frequency-based signal detecting software (MATLAB) used by low altitude satellites.

Education

2016-2017 **Masters** in Computer Engineering — UFRN - Brazil
Final Mark: 10/10 | Included A Period in The SMART Lab (Ottawa, Canada) As A Visiting Researcher.

2014-2015 **Undergraduate** in Computer Science — Swansea University - Swansea, Wales
Final Mark: 7.1/10 | Scholarship Awarded from The Science Without Borders Programme

2013–2015 **Undergraduate** in Computer Engineering — UFRN - Brazil
Final Mark: 9.6/10 | Result Among the Top 0.16% Highest in The History of This Undergraduate Course.

Additional Activities

2020 **Coding Project Development** — Github
Modelling ML

2020 **Online Course** — Udemy
Quantitative Finance & Algorithmic Trading in Python

2019 **Online Course** — Udemy
Python for Financial Analysis and Algorithmic Trading

2018 **Online Course** — University of Michigan - edX
Introduction to User Experience

2015 **Volunteer Researcher** — Future Interaction Technology Lab - Swansea University
Volunteer Researcher in the field of Human-Computer Interaction.

2014 **Research Project** — Machine Learning and Intelligent Instrumentation Laboratory - UFRN
Embedded Applications Using Microcontrollers and FPGA.

2013 **Research Project** — Computer Engineering Department - UFRN
Using Computational Tools in Wind Turbine Study.

Publications

2020 **Journal Paper** — Nature
Evaluating the burden of COVID-19 on hospital resources in Bahia, Brazil: A modelling-based analysis of 14.8 million individuals.

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.

2019 **Journal Paper** — IEEE Access
Deep Neural Network Hardware Implementation Based on Stacked Sparse Autoencoder.

2016 **Journal Paper - (Honorable Mention)** — CHI 2016
Emergeables: Deformable Displays for Continuous Eyes-Free Mobile Interaction.