Michele Valotti

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https://github.com/michelevalotti

Motivated physics graduate with experience in programming and a strong interest in technology, fast learner and adaptable.

Education

Durham University — 2:1 (68%) MPhys Master in Physics
OCTOBER 2015 - JULY 2019 ~ DURHAM, UK

The course includes practical, theoretical and computational training. Dissertation in the simulation of Quantum Dynamics on fixed graphs (1st).

Liceo Scientifico "Calini" — 100/100 High School Diploma
OCTOBER 2010 - JULY 2015 ~ BRESCIA, ITALY

Scientific high school with a focus on maths and physics.

Studied a term abroad in Yarrawonga, Australia (2014).

Professional Experience

Junior Software Engineer/Data Scientist — Oxford Brain Diagnostics
MARCH 2020 - PRESENT

Working at Oxford Brain Diagnostics, an Oxford University spin-out start-up, I am developing software in a research-intensive environment to aid in the early detection of Alzheimer's Disease.

The current patented technology has been published in a number of academic papers and has the potential to be used to identify other brain conditions.

Data Analysis Intern — The Boston Consulting Group (BCG)
NOVEMBER 2019 - FEBRUARY 2020

Worked on data-driven predictive tools for multi-million dollar clients, managing large amounts of data (Pandas), and supporting the development of the predictive algorithms (Alteryx, Python).

Strengthened my skills in software development technologies like PyCharm and Git, working with production-grade code.

Presented the results to both corporate clients and senior management in a concise and effective way (Excel, PowerPoint, Tableau).

Computer Vision Intern — Durham University
JUNE 2018 - AUGUST 2018

Built a Python framework to remotely control a mobile robot through brain stimuli. Developed scripts for object detection and selection (OpenCV), sending and interpreting inputs (Socket and AriaPy), and adapted a Convolutional Neural Network to decode brain waves.

Carried out independent research and collaborated with a team of Ph.D. students. Effectively communicated my findings to field experts, ranking second for best project among those sponsored.

Skills

Intermediate: Python, Microsoft Office
Working Knowledge: Java, LaTeX, Git, Linux

PROGRAMMING EXPERIENCE

Qubit error detection and correction — 74% 3rd year project
OCTOBER 2017 - APRIL 2018

7 month long project, involving a python simulation of qubit dynamics and quantum computer circuit.

Quantum dynamics on fixed graphs — 77% 4th year project

OCTOBER 2018 - APRIL 2019

7 month long project building a Python framework to simulate the transport properties of quantum particles on lattices with varying degrees of symmetry (i.e. carbon nanotubes).

LANGUAGES

English (fluent), Italian (native language)

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Additional Information

Awards	Awarded second place for best poster for the project carried out as a computer vision intern
Other courses and events	The use of Durham University supercomputer (2019)
	BAE Capture the Flag event focused on cybersecurity (2016)
Other working activities	Tutored younger students in maths and physics (2014)
Student projects	Assisted in the construction of a student-built solar car (2015-2017)
Student societies	Captain of the basketball college team (2017-2019)
	Part of hiking, frisbee, table tennis and tennis society (2015-2019)