Magnus Ross

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SUMMARY

Final year student at the University of Bristol studying for an MSci in Physics, with a strong interest in machine learning and its application to the study of environmental risks. On track to graduate with a first class degree in June 2020.

EDUCATION

University of Bristol

Physics MSci, Current — Credit Weighted Mean: 77%

I have consistently demonstrated strong mathematical and programming ability whilst at University. I achieved a first in my first year, where I took 5 units from the School of Mathematics: Linear Algebra, Calculus, Probability, and Analysis A/B. I scored 82 in the unit Mathematical Physics and 85 in Nuclear and Particle Physics in my second year. Last year I achieved marks of 85 in both Methods of Theoretical Physics and Quantum Physics, both highly mathematical units. I also scored 84 in Computational Physics, 80 in Machine Learning and 87 in Optoelectronic Devices and Systems. I am currently working on a master's project entitled 'Deep Learning for event classification at the LUX-ZEPLIN experiment'

Lancaster Royal Grammar School

2009-2016

A* in A-level Maths, Further Maths and Physics, A in AS-level Chemistry. 10 GCSEs with 6 A* grades, 2 A grades, and 2 B grades.

EXPERIENCE

Summer Research Intern

University of Bristol (Particle Physics Group), Summer 2019

I undertook a funded 8 week research project entitled 'Searches for new physics with Machine Learning at the LHC'. I developed a neural network model for classification of detector events as 'new physics' or background. This achieved a large performance increase on certain classes of signal models, when compared to previous hand designed classifiers.

Physical Design Intern

Graphcore (`graphcore.ai`), Summer 2018

I completed an 8 week internship as part of the physical design team at Graphcore, a firm that make hardware accelerators for machine intelligence applications. I worked on a project investigating new, more efficient logical cells to be used on the Graphcore IPU chip. This included simulation of logical cells with SPICE, the physical design of logical cells, and a large amount of data analysis in Python.

Teaching Assistant

University of Bristol, 2019

I worked as a teaching assistant on the third year unit Machine Learning from the Department of Computer Science. The role involved helping students and answering their questions in a 'lab' setting. I was invited to help with the course by the unit director, Dr Carl Henrik Ek.

OTHER

- Current volunteer at Bristol organisation DigiLocal, helping primary school children to learn Scratch and Python.
- Worked as a data analysis intern for micro finance charity Deki in summer 2017.
- Co-founded a casual business trading old film cameras on eBay. Whilst operational in summer 2017 sold approximately £5000 worth of cameras, with 100% customer satisfaction from 50 reviews.
- Keen runner, have completed the London Marathon twice, in 2016 and this year.
- Also enjoy DJing, playing semi-regularly in bars and clubs around Bristol.