



Student: Jake Minns,
University of Kent

Placement: Mafic

Role: Machine
Learning Engineer
(Now a job role)

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What is the subject of your PhD?

An investigation into the structural dynamics of hybrid perovskites related to photovoltaic applications.

Describe a typical day on placement

The majority of the work involved building and testing machine learning architectures for the purpose of solving classification problems as well as developing data analysis tools for better understanding the results and the large data sets used for training the neural networks. This meant that most of the day was spent programming, this was often broken up with regular breaks used for discussions about the work being carried out and general company projects.

What skills and knowledge have you gained during the placement?

An improved understanding of machine learning techniques and the Python package TensorFlow for the development of neural network architectures. I developed a software tool for analysing the data used to train the neural network, this required a GUI and a large number of features. I learnt to use the application framework Qt and improved my ability to design and construct large software projects that would be used by others.

How do you think doing a placement has benefited you for the future?

I have a better understanding of what it's like to work at a startup. As this is the kind of company environment I wish to work at in the future, I found the experience to be very valuable. I gained experience as a machine learning engineer, a discipline that will be relevant to my future career. I applied machine learning to solve real problems in a commercial setting, an experience that would be difficult to replicate within a university environment.

What advice would you give to a PGR student who might be interested in seeking a placement?

These placements provide an excellent opportunity to gain experience in a discipline you may wish to pursue as a future career.

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