

## Sam Jackson - Personal Statement

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My enthusiasm for computer science comes from two factors: my natural curiosity towards things I don't understand and my passion for problem solving. Computers are complex machines and I am continually fascinated by new ways in which they can be applied them to solving problems in an intelligent way. For me the most exciting part of my subject is learning a new or technique and applying it to solve problems. I want to spend my career solving challenging problems, not reinventing the wheel.

I'm interested in getting into research in medical imaging for a variety of reasons. Firstly, I think this provides a very challenging area of research which provides numerous challenges to even the most experienced researcher. Secondly I believe that medical imaging is a very active area of research with an extremely broad scope of research opportunities. Finally, I believe that medical imaging is a worth while research area because the output that it creates has direct application to the real world.

The centre for doctoral training in medical imaging caught my attention as an fantastic opportunity to get started in this research area. The thing excites me most about the CDT is the collaboration that it can offer between clinical and non-clinical experts, which I feel is one of the most important features on offer at UCL. I also feel that the fact that the programme structure includes a first year MRes. As an undergraduate applicant I feel that will give me an opportunity to get a better grounding with the technical skills necessary to complete a PhD in medical imaging.

Currently I am working through the fourth year of my degree where I am currently undertaking my dissertation project applying dimensionality reduction techniques to the feature space of both real and synthetically generated mammograms. The end goals of the project are to evaluate the similarity the two datasets under projection, particularly in regards to risk classification. I have enjoyed every second of this project so far and am eager to develop this interest further through postgraduate study.

Previously during my undergraduate I undertook a placement year at ISIS Neutron source where I worked to develop data analysis software for neutron scattering instruments where I worked in close collaboration between computer scientists and physicists. It was during this placement that I realised the importance of collaboration between disciplines and is while I feel this is an important factor in my choice of academic environment. This experience also improvement my communication skills through the requirement for constant communication members for both teams I was a involved with.

My communication skills are also emphasised by my prior experience as a practical demonstrator during my undergraduate. This was one of my most rewarding university experiences because I was given the opportunity to help pass on my passion for computer science to younger students while at the same time keeping my own technical knowledge sharp. I would hope that during the postgraduate course at UCL there would potentially an opportunity to continue to get involved in teaching.