



Reference letter

Dr Sylwia Polberg

Lecturer of Computer Science and Informatics

Cardiff University

Abacws Building, Senghennydd Rd

Cardiff CF24 4AX , United Kingdom

polbergs@cardiff.ac.uk

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Dear Sir/Madam,

Jack Sanderson was my student during the CM2203 Informatics module at Cardiff University in the 2021/22 academic year. In this module, the student worked on a series of topics pertaining to informatics, including machine learning, data mining, data quality, opinion mining and data ethics.

Despite the difficulties caused by the pandemic, Jack Sanderson has achieved a grade of 71% (excellent, First Class). During this module, the student was assessed individually using three connected portfolios.

The first portfolio, in addition to testing students' skills associated with the content of the module on a weekly basis, put an emphasis on reflection. Every student was required to reflect on their learning several times during the term in order to develop a problem-solving attitude and become aware of the practical value of the topics they were being taught. Jack Sanderson has achieved a grade of 90% for their work, thus proving their competence in topics ranging from knowledge discovery to data quality and reflective skills.

The second portfolio focused on programming skills and independent inquiry. It tested the student's ability to execute and evaluate classifiers and similarity measures in the context of basic image recognition that involved realistic data. I am pleased to say Jack Sanderson has achieved a grade of 66% for their work. This grade is also a testament to Jack's ability to overcome challenges and obstacles, as they have scored a high grade despite the health issues occurring during that assessment.

The last, most advanced and uniquely challenging portfolio, focused on data ethics. We looked at how certain algorithms could be led astray and misbehave, and what could be done to fix these. The student faced the issues of racial and gender biases exhibited by the previously created classifier. They needed to show in-depth understanding of how and why they arose in their solution, and show independence and foresight in investigating different frameworks they could use to limit such issues in the future. Jack Sanderson has achieved a grade of 52% for their work, which demonstrates their abilities in recognizing and combating ethical issues that can arise particularly in the context of machine learning.

All of this shows that Jack Sanderson is capable of working independently, exhibits innovative and critical thinking, and has both a theoretical as well as practical understanding of various topics related to informatics. Furthermore, I am pleased both with the student's programming skills as well as the ability to express oneself in written format.

I therefore believe Jack Sanderson is a promising candidate for postgraduate studies and I expect them to continue developing their skills and achieving high marks. Do not hesitate to contact me on my e-mail for a further discussion.

Yours faithfully,

Dr Sylwia Polberg