



16 August 2024.

To whom it may concern,

Reference for Michael Bogale

Michael started the MSc Artificial Intelligence on 26 September 2022, and completed it on 13 November 2023, gaining a distinction.

Michael was a hard-working student and was able to pick up complicated topics very quickly. He excelled in many of his modules, gaining an average mark overall of 67%. However, this average was brought down by his lower performance in his first semester. His average of his second and third semesters was 73%, where he gained a distinction in every module, suggesting he was just a 'slow starter' on the course, and showed his true ability later.

I supervised Michael for his dissertation, which was on building a model of battery levels in an electric car over a long journey, and applying AI to find the optimal location and charge times to minimise the total journey time. This involved data collection, model building, machine learning and optimisation. He was extremely hard working and self-motivated. He attended every supervision meeting without fail and consistently set his own targets for the following meeting, which he regularly completed. In addition, I taught him on MATPMD4 Optimisation. Again, he regularly attended classes and always asked interesting questions demonstrating on his desire to learn. He carried out a project designing an optimisation algorithm to maximise the nutritional value of a meal while also minimising the total cost. He did very well here, gaining a mark of 83% for the Project.

Michael has proven himself to be excellent academically and I have no hesitation in recommending him for a PhD.

Yours sincerely

Dr Andrew Hoyle

Senior Lecturer
Divisional Director Learning and Teaching (Computing Science and Mathematics)
Programme Director: MSc Mathematics and Data Science
E: andrew.hoyle@stir.ac.uk