From October to December 2019, I undertook a placement as an operational researcher with the Scottish Government in Edinburgh. I worked with operational researchers from across the Scottish Government, and statisticians and policy officials from the Directorate for Learning. The experience was very interesting, and I got a lot of useful skills out of it.

Essentially, my project involved rebuilding and updating the assumptions contained in a model used to create projections of the Scottish teacher workforce. The previous version of the model hadn’t been fully updated in many years and used multiple programs to generate the projections. This made learning to use the model challenging, as there was no guide to what each section contained. The first part of my internship required me to understand the flow of the old model and the assumptions underlying the projections to assess their validity. This required a lot of discussion with the statisticians who would be using the model to figure out what assumptions could be made and with the policy team to figure out what outputs were important to them.

Continuing from there, the second part of my project was to rewrite the model in a single piece of code. I chose to write the model in R because of my previous programming experience with Python. This involved my learning R, but my inexperience with R was an asset in making the code easy to understand for those who would have to update the model once I’d left. The newly rewritten model was more flexible in its use, partly due to it being written in one program, and partly due to the ability to run each section of the model separately.

I really appreciated the chance to work with Scottish Government analysts on a project like this. It gave me a great opportunity to work on both my analytical skills and my programming ability. Working with teams with different backgrounds and interests on a single project was a new and exciting challenge for me. Additionally, it gave me a view of what operational research involved and confirmed to me that this would be an area I could see myself working in after my PhD. I would certainly consider working for the Scottish Government again in a similar capacity.