In this project, a vast amount of time was spent determining and pinpointing the particular research problem, and the project design. Although the topic remained the same, there was increasing pressure to find research gaps in order to find a path forward. This led to incessant reading for the first twenty-two weeks, in a bid to find a novel problem.

The project also involved various strategies to implement a suitable artefact. This led to attending multiple online boot-camps to ensure the relevant skills were acquired, ready to put into practice. Part of this problem was the attention given to the artefact, instead of determining the research problem at hand. The necessary inclusion of an artefact proved hugely distracting to the original problem. If such a project was to be revisited, it is clear that an early diagnosis of the problem is of paramount importance, leading to having a strong foundation for the project. This problem could be eased by understanding the requirements for such a project in advance, and thinking during earlier modules to see how they might offer help in forming the ultimate deliverable.

However, this particular downfall did have some positives, namely the acquisition of several new skills. Among these include new insight into containerisation technologies such as Docker, with further knowledge acquisition of Docker Swarm, and further insight into tools such as Snyk in order to secure containers. Further Linux skills were also acquired, in particular how to implement iptables and ssh tunnels.

Various Python modules including Beautiful Soup, Requests, Colorama, Fabric, Pythonping, as well as new MQTT techniques such as the use of Last Will messages were also acquired.

Naturally, as part of research for a capstone project around the subject of IoT, much content was digested regarding the different communication technologies, and how they work, types of physical IoT devices and how they are composed, and attack vectors and techniques.

Many ethical concerns regarding the usage of such devices were discovered, as was regulation as to their responsible usage.

In terms of soft skills, much time was likely wasted in reading entire research papers. In future, this would not be a recommended approach. Advice was offered on this, however there was always the temptation to try and cover all grounds in the hope that nothing would be missed. Abstracts are arguably better scanned, and perhaps conclusions too, in order to gain a feel for the paper before delving in to the entire works.