# 7CS997 Independent Studies Progress Report

## Student/supervisor details

**Submission deadline for signed and completed progress report:**

* **Progress report XXXXXXXXXXXXXXX**

Project Title: **XXXXXXXXXXXXXXXXX**

Name: **XXXXXXXXXXXXXXXXX**

Student Id: **XXXXXXXXXXXXXXXXX**

MSc: **XXXXXXXXXXXXXXXXX**

Supervisor: **XXXXXXXXXXXXXXXXX**

Progress report: 2

## Record of meeting

The meeting commenced with a deliberation on the advancements achieved so far in relation to the project. Some of the progress made include:

1. **Completion of Literature Review**: Based on the documented review, we deliberated on the findings of some authors that examined the use of machine learning for securing healthcare systems. Subsequently, we talked about some of the identified research gaps and the novel innovation the project is presently implementing to bridge these gaps.
2. **Completion of the Dataset Collection**: Three distinct datasets were acquired, and we had a discussion on the characteristics and features of each dataset. Additionally, there was an exploration of the various types of attacks contained within these datasets. This ensured that a diverse range of attack types were represented in the collected data, enhancing the robustness of the implementation.
3. **Completion of Data Preprocessing**: We discussed the steps employed to prepare the data for analysis. Key topics include data cleaning, standardisation, and feature selection as well as the splitting of data into training and testing sets.
4. **Commencement of Model Development**: We discussed the different algorithms the project is utilising to develop robust models for securing healthcare systems.

It was concluded that the conceptual representation of the framework requires modifications in order to accurately portray the model's process.

## Evaluation of progress

According to the Gantt Chart, the Literature Review, Data Collection, and Data Pre-processing phases have been completed. Currently, the project is in the Practical Implementation phase, specifically focusing on Model Development and Evaluation. This stage involves building Machine Learning models and assessing their performance using metrics such as accuracy, precision, recall, and F1 score. This process is estimated to span a period of two weeks. Consequently, the project has progressed beyond the initial preparation stage and is actively implementing machine-learning solutions. The Gantt Chart indicates that the Practical Implementation phase is proceeding according to the specified schedule.

Additionally, as indicated on the Gantt Chart, the Documentation stage of the project is also in progress and is scheduled to last for two months, specifically July and August. This phase is focused on documenting various aspects of the project. Substantial progress has been made in this regard, as several processes involving the implementation have already been properly documented. Moreover, essential components such as the Background of the Study, Research Methodology, and Literature Review have also been appropriately documented. The Gantt chart shows that the documentation phase is progressing according to the plan.

## Actions/targets for the next meeting

*List up to 5 (five) actions or targets for the next meeting agreed with your supervisor. These should be the things that you are intending to do, and should take into account the plan in the Gantt chart, and your evaluation of your progress. In subsequent meetings, you can review these actions (in your evaluation) so that you can measure your progress relative to your plan.*

1. Completion of the Model Development
2. Evaluating the Performance of the Model
3. Ensuring that all essential techniques are utilised for enhanced output.
4. Design a better conceptual framework for the Model’s workflow.
5. Progress with the Project Documentation

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## Record of meetings held.

*The table below should contain the meeting schedule that you planned with your supervisor at the start of the project. In the “Confirmation” column on the right, you should confirm the meeting has been held by including a “Y” or “N” in the relevant box. If there has been a need to change the original meeting schedule planned, you should update this table.*

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| --- | --- | --- | --- | --- |
| Project week | Meeting date | Meeting time | Venue | Confirmation |
| 1: 05/06/2023 | 05/06/2023 | 11:00-11:45 am | MS306 | Y |
| 3: 19/06/2023 | 19/06/2023 | 2:00-3:00 pm | MS306 | Y |
| 5: 03/07/2023 | 03/07/2023 | 2:00-3:00 pm | MS306 | Y |
| 7: 17/07/2023 | 17/07/2023 | 2:00-3:00 pm | MS306 |  |
| 9: 31/07/2023 | 31/07/2023 | 2:00-3:00 pm | MS306 |  |
| 11: 14/08/2023 | 14/08/2023 | 2:00-3:00 pm | MS306 |  |

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Student Name Supervisor Name

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Student Signature Supervisor Signature

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Date Date