Project Review Proforma – Review number: 3 Date: 6/3/2024

<table>
<tr>
<td>Summarised Planned State of Project:
Thesis Draft:
1. Start planning and write the outline of the thesis.
2. Complete introduction and literature review.

Complete the first cycle of obtaining real-time inference using values from sensors:
1. Successfully deploy the model onto hardware.
2. Determine the limitation of hardware.
3. Perform analysis on the model inference time, accuracy and size.

Debugging firmware deployment on STM32CubeIDE:
1. Research and debug the problem faced and the error prompted on the STM32CubeIDE.</td>
<td>Actual Progress Since Last Review
Thesis Draft:
1. The thesis draft planning was done according to plan.

Complete the first cycle of obtaining real-time inference using values from sensors:
1. Real-time model inference was obtained and printed on a serial monitor.
2. Tackle model overfitting issue.
3. The task was performed according to plan.

Debugging firmware deployment on STM32CubeIDE:
1. Debugging deployment of AI models and sensor code.
2. The SRAM issue was determined and the model was retrained to reduce the complexity.
3. The task was performed according to plan.</td>
</tr>
<tr>
<td colspan="2">Next Steps
1. Continue writing the thesis draft.
2. Perform experiments to determine the hardware limitations of STM32MP157F-DK2.
3. Research CNN model architecture.

Supervisor Feedback
The supervisor suggested conducting experiments on the ANN architecture using varying numbers of inputs to ascertain the hardware limitations of the STM32MP157F-DK2. Additionally, it was recommended to explore CNN model architectures through research and attempt deployment if feasible. The suggestion to delve into CNN model architectures underscores the potential for enhancing the project's capabilities through the adoption of alternative neural network structures, potentially improving the performance of the model.</td>
</tr>
</table>