EEE3097S Weekly Review Submission 5

Meeting 4: DSLGRE001 ADMALI004 16/09/2021

We met for 1 hour via MS Teams

Results from past submission:

Mark: 80.36/100

We were happy with the outcome of the Paper Design submission, our tutor told us to add a little more information relating to the official supplied requirement for the ATP's, we will look into this and add them accordingly for our next submission/final submission.

Part of the feedback was to retain the lowest 25% Fourier Coefficients, there was an error on our side on interpreting this requirement as we thought any 25% would be fine, we will be looking into this over the next submission period.

Other than that, we believe our result for the submission reflected our hard work but we are still determined to improve our mark by making use of the valuable feedback from our tutor.

Implementation of algorithms:

It has been confirmed that the smartphone is able to extract the necessary IMU data. The current challenge is that we need to change the algorithm to extract the lowest 25% of the data and not just any 25% of the data. This will be tested in the week before the Paper 2 Design Handin.

For the compression part of the system, the data is compressing fairly correctly. There are a few bugs that need to be ironed out. The next step is to decompress the data and compare it to ensure that no data is being lost in the process and that it is still accurate.

For the encryption part of the system, more research has been done into the type of encryption that is suitable for the compression size of the data. Some encryption methods have a limitation on how much data it can encrypt thus the official method of encryption will only be determined once the compression algorithm works completely.

Once all the individual systems work completely correctly on their own, they will be cascaded together and tests will be done to ensure that it meets the requirements of the project. This will all be done by next week.

Reflect on tutor meeting this past week:

We met with our tutor on Monday, 13 September, the feedback we provided on the past week was that we started gathering data using MATLAB Mobile on a smartphone and will be implementing our algorithms on this data. We will be testing these algorithms on the Pi by uploading our data to Github and then cloning the repo onto the pi to implement the compression and encryption. We will then run our tests to ensure that our ATP's are met, if they are not successful, we will make a note of it and bring it up at our next review meeting to get some assistance from our tutor.