Research Project Progress Report Week 7 – SIT723

Student Name:	Tithra Chap
Supervisors' Names:	Assoc Professor Richard Dazeley, Dr Bahareh Nakisa, Dr Sunil Aryal
Project Title:	Emotion Recognition Using Facial Expression
SIT723 Target Grade:	HD
Overleaf Project Link:	https://www.overleaf.com/6618692772zcghdsfqcybf
Project Folder Link:	https://github.com/Tithra/SIT723.git
Worklog:	34hrs 20mins https://github.com/Tithra/SIT723/blob/c8093a262c2e029f7ce643063e0cb50168b6408d/Worklog.xlsx
Project Plan	
Summary of the work planned with your supervisor:	Based on the discussion with supervisors, I need to reformat my experiment results to provide more details and make it easier to comprehend. More, I need to reconstruct the codes to extend the experiment up to 10 folds of cross validation by resolving limited access of google colab free account. Third task was to find out if the pre-processed augmentation would be more suitable then real-time augmentation for our experiment case and pick an appropriate one. Lastly, I need to run experiment and get more results using 10 folds cross-validation.

Summary of the work done:	I have formed a detailed and more explainable report format that fully describes experiment setting such as model, dataset, sample, pre-processing, and parameter options. I have completed the codes for saving and reloading models, and it works perfectly. I also found that real-time augmentation is more suitable for our experiment case because it reduces the need for memory to store pre-processed augmented images and it generalizes better with dynamic augmentation during run time. Lastly, I have managed to produce two set of experiment results using 10 folds cross validation and will report them on the up-coming meeting.
Next steps:	It seems that individual optimizer parameter has different performance on FER2013 dataset. I am looking to work on parameters grid search to find the best optimizer for the model. Although it is a costly experiment, I believe it is worth to try to locate a possibility to improve the model.
Overall project progress:	Looking back at the backlog, I am perfectly on the track or even ahead of schedule by now. Therefore, I still have time to improve my model in any possible way before wrapping it for a final report.