CSCI 4340 MACHINE LEARNING
GROUP PROJECT

Student Name & Matric No:	
Semester:	Semester 1 2022/2023
Lecturer:	Assoc. Prof. Ts. Dr. Amelia Ritahani binti Ismail
Due Date:	15th January 2024

Learning Outcomes:

1. To familiarise students with critical thinking concepts into various machine learning applications
2. To expose students to evaluate machine learning algorithms to be applied to specific computer science problems. Students can choose an algorithms that has not been studied in the classroom with a recent combine concepts, techniques or hybrid and compare the performances of the chosen techniques with any algorithm that has been studied in class.
3. To test various parameter, transfer function, optimiser to the model
4. To apply, test, and interpret machine learning algorithms together and foster a healthy intellectual discourse when completing the group project.
5. To deploy the model to be applicable to the user to be tested with new dataset.

Task:

1. Your report should includes the following contents:

    i. Abstract
        This section explain briefly which algorithms you choose to combine, why, what challenges and brief indication of the result you achieved
    ii. Introduction
        This chapter includes the explanation on the background of your problem. Explain the data you have chosen, why you have chosen this data and what do you plan to get out of the data through machine learning.
    iii. Literature Review
        Conduct a literature review on the methods or models that you plan to combine for your project. Use this section to provide justification why you have chosen these machine learning algorithms (over others).
    iv. Data Analysis
        This chapter explain the exploratory data analysis and highlight any data pre-processing that has been done.
    v. Experimental Setup
        This chapter describes your chosen methodology. You will also need to explain here how your two algorithms will complement each other to improve model performance.
    vi. Deployment
        Explain your deployment process
    vii. Results & Discussion
        Share the results obtained from your implemented model. Discuss how the combination of the methods or algorithms chosen has affected the results of the

        individual algorithm or the algorithm before it's been combined. Share your opinion and theories on the results and any insight you have on how they can be improved.

viii. Conclusion

This section summarises your groups' work. You must explain the contribution of each group member towards completing the assignment. You need to summarise what was learnt from this entire activity and any avenues for future work and improvements.

ix. References

2. After completing the project, prepare a video by all the members of the group to present your work and pitch your model. The content should include:

    i. Background
    ii. Data Analysis
    iii. Explanation of The Methodology
    iv. Discussion on the Results
    v. Conclusion and Future Work

Your Project will be marked according to the following:

1. Report [10 marks]
2. Data Analysis [5 marks]
3. Model Development [10 marks]
4. Experimental Process [10 marks]
5. Analysis of Results [10 marks]
6. Deployment [5 marks]
7. Video Group Presentation – you tube link preferred [for code / deployment explanation]
8. Class Presentation [10 marks-individual]