University of Essex
MSc Artificial Intelligence
Module: ML_PCOM7E July 2025 B
Unit 12:   Assessment – Individual Reflection

Individual Reflection

I.   Introduction

This module revolved around two major projects: a group project and an individual presentation. Both are discussed in the context of the Gibbs' Reflective Cycle ("the cycle"), a widely-used tool for personal reflection on learning outcomes from student work (Praveena et al, 2025).

As introduction, the cycle is divided into six interrelated and overlapping steps: Description, Feelings, Evaluation, Analysis, Conclusion, and Action Plan (Praveena et al, 2025). Accordingly, this reflective essay discusses each step in order:

II.   Description

The Description step of the Gibbs' Reflective Cycle is used to describe the work that was accomplished (Praveena et al, 2025). In short:

1. The group project focused on creating and refining a model for analyzing Airbnb rental prices in the greater New York City area using open source data provided by Airbnb (Bullen, 2025a).

2. The individual presentation focused on building and evaluating a model for categorizing stock photo thumbnails by image content type; for example, categorizing an image as a "car" versus a "truck" (Bullen, 2025b).

III.   Feelings

The Feelings step of the Gibbs' Reflective Cycle examines subjective motivation to engage with the subject matter of the work undertaken (Praveena et al, 2025).

Overall, I felt that both projects were engaging and contributed to developing a better understanding of the basic mechanics for creating and evaluating machine learning-based models.

For the individual presentation, I haven't had the opportunity to do many presentations of any kind in my professional work. Due to that, I felt that I lacked a bit of confidence in how well my presentation communicated its core material.

IV.   Evaluation

The Evaluation step discusses those areas of work that succeeded versus those that were challenging or otherwise presented issues (Praveena et al, 2025).

For the group project, team engagement was a clear success. All of the team members actively participated and contributed significantly to the project outcome on schedule and without issue. A distinct challenge, however, was coordinating group work across widely-differing time zones; it is my understanding that each person in the group was located in a different country, which largely restricted the group to communicating via asynchronous instant messages on Discord, rather than synchronously by way of face-to-face video calls.

For the individual presentation, I found it quite worthwhile as practice to gain hands on experience using the Python coding packages needed to assemble a model, as I have had limited direct experience with Python code in my professional work in any subject matter area.

I found it challenging, however, based on that same limited experience with both Python and model training code, to distinguish between those elements of the code that were truly necessary, versus simply "nice to have," such as determining which hyperparameters were materially significant to model performance.

V.   Analysis

The Analysis step of the Gibbs' Reflective Cycle takes an overarching view of the work undertaken with an eye to identifying lessons learned and opportunities for future improvement (Praveena et al, 2025).

In terms of the group project, I would say that the group coordination challenges were structurally unavoidable, simply due to where each person lived and the corresponding time zone differences. While the group was able to spontaneously agree on a mode of communication that overcame that challenge (a Discord server provided by a group member), the thought does occur that it could have been somewhat serendipitous that we did coordinate the administrative side as well as we did.

It was equally feasible that communication challenges could have significantly impaired, or even prevented, finishing the project on time with a fair division of the work between group members.

For the individual project, while none of the code required to complete the project was unnecessarily complicated, the simple fact that it was new to my experience in general led to the need to spend more time on it than others with more experience might have needed to do.

VI.   Conclusion

The Conclusion step summarizes the conclusions from the preceding steps of the cycle (Praveena et al, 2025).

Overall, I would conclude that both projects achieved the outcomes they set out do. The group project was able to coordinate group members to achieve our goal on schedule. The individual presentation, as a project, was effective in introducing the practical components of working with machine learning modeling code.

VII.   Action Plan

The Action Plan step of the Gibbs' Reflective Cycle identifies productive actions to take in the future to capitalize on lessons learned and to minimize previous mistakes or areas of personal struggle (Praveena et al, 2025).

In the future, I would budget more time to established clear lines of communication for a group project. I would also make deadlines for each group member more explicit (even though that was not an issue for my group), simply to make the process of completing the assignment clearer and more efficient for all group members. Lastly, I would also make group work product quality standards clear and agreed upon ahead of time among group members.

For a future individual project in the same vein as this module's individual presentation, I would budget more time to explore the code packages necessary for the project, with an eye to gauging which parts of the reference code would be truly useful, versus which would present distractions or unproductive avenues of exploration in regard to completing the assigned task.

For any future project involving training a machine learning model, I would also budget more time for training and testing the model. While the data set used in this module's project was reasonably small, which led to relatively brief model training cycle durations (less than an hour for each), that is unlikely to be the case for larger training sets, or for real world applications.

VIII.   References

Bullen, Matthew (2025a). ML_PCOM7E July 2025 B Project Report.

Bullen, Matthew (2025b). ML_PCOM7E July 2025 B Presentation Slides.

Praveena, K.S., Juslin, F., Patil, C.M. and Bhargavi, K. (2025). Using Gibb's Reflective Model Approach for Enhancing Project-Based Learning Among Students Through Reflective Assessment. *Journal of Engineering Education Transformations*, [online] 38(2), pp.148–155. doi:https://doi.org/10.16920/jeet/2025/v38is2/25018.