

# Milestone 3 – BIA 5402

Congratulations on reaching Milestone 3 of the Machine Learning 2 project! By this stage, you have successfully cleaned your datasets and are ready to apply machine learning models. The primary focus of this milestone is to develop, evaluate, and present your machine learning models in Python. Below are the expectations and requirements for Milestone 3:

## 1. Machine Learning Model Development:

1. Implement at least two different machine learning algorithms in Python for your dataset.
2. Choose appropriate algorithms based on your problem type (e.g., CNN, ARIMA) and dataset characteristics.
3. Provide a clear explanation of the selected algorithms and their suitability for the task.

## 2. Model Evaluation:

1. Split your dataset into training and testing sets to assess the model's performance.
2. Use appropriate evaluation metrics depending on the problem type (e.g., accuracy, precision, recall, F1-score for classification; RMSE, MAE for regression), etc).
3. Discuss the evaluation results and compare the performance of the two models you implemented.

## 3. Documentation, and Report:

1. Prepare a comprehensive report documenting your entire machine learning pipeline in an IEEE access journal paper submission template, accessible via
2. Describe the data cleaning process, including any challenges faced and how they were addressed.
3. Present details about the machine learning models, including the hyper-parameters chosen and the reasoning behind those choices.
4. Include the results of model evaluation, visualizations, and any insights gained.
5. Clearly present your conclusions based on the analysis.

## 4. Code Submission:

1. Submit well-commented and organized Python code files that demonstrate your entire project workflow.
2. Ensure that your code is reproducible, meaning anyone should be able to run the code and reproduce your results.
3. Use version control (e.g., Git) to track changes and manage collaboration if you're working in a team.

## 5. Presentation to the Professor:

1. Prepare a concise and engaging presentation that covers the key aspects of your project. Submit it with code and report in a PPT format. If the professor has asked you to submit your presentations online, record your presentation on behalf of your group and submit it online as an MP4. Otherwise, follow in-class presentation instructions and submit a PPT with your completed report and code link/ file.
2. Clearly explain the problem statement, the steps taken for data cleaning, and the rationale behind the chosen ML models.
3. Present the evaluation results and discuss the strengths and limitations of your approach.

4. Be prepared to answer questions by your professor.

**6. Submission Deadline:**

- Submit your report and code before the agreed-upon deadline.

Good luck with Milestone 3! Feel free to reach out if you have any questions or need further assistance.