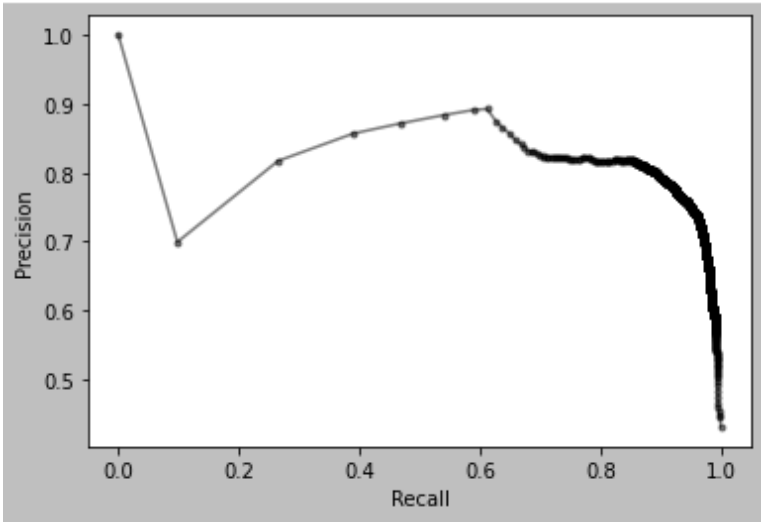
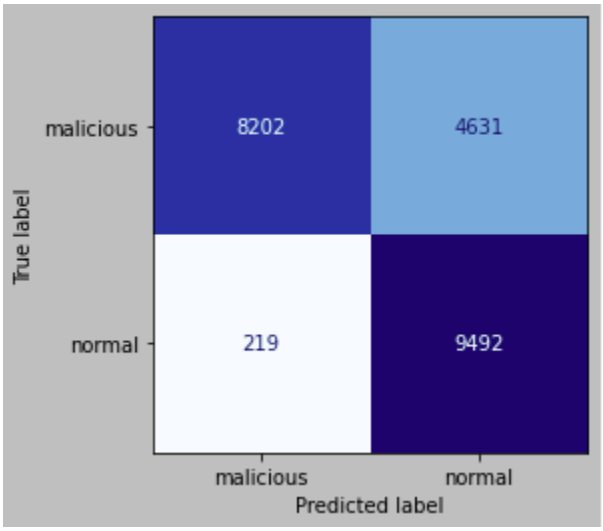
Task:
Balance the dataset and train an MLP

Output:
Maintained 1:1 ratio between Normal and Attack classes
Normal: 160000
Attack : 160000



F1: 79.651%
AUC: 81.895%
Accuracy: 78.487%
Precision: 97.400%
Recall: 63.910%



Conclusion:

1. Used a shallow MLP for the detection task.
2. Due to the inherent bias in the original data, the models were inclined towards the larger number of instances.
3. Added an equal number of attacks to the original dataset and used a shallow MLP for the detection task.
4. Now the miss rate has decreased due to the inclusion of a large number of attacks in the training data.
5. Creating a stratified dataset did not improve the accuracy by much.

Next:

1. Incorporate Zero Shot Learning strategy.