**Department of Software Engineering**

**CS471: Machine Learning**

**Class: BESE-12AB**

**Lab 08: Naïve Bayes Classifier**

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# Lab 08: Naïve Bayes Classifier

**Introduction:**

The Naïve Bayes classifier is a supervised machine learning algorithm that is used for classification tasks such as text classification. They use principles of probability to perform classification tasks.

**Objective:**

* Understand and implement Naïve Bayes on MNIST dataset.
* Compare and analyze results with other algorithms.

**Tools:**

Google colab or equivalent environment

**Lab Task:**

Train a Gaussian Naïve Bayes classifier on the MNIST digits dataset. Compare your results with classifiers including Decision Trees, Support Vector Classifier and Logistic Regression Classifier. Identify which technique performs best on the digits dataset and explain why the performance of this technique is better than all the others.

**Deliverable:**

Jupyter notebook with code, result, analysis, and discussion