1	**Design and implement pattern recognition system to identify and extract unique species patterns from the Iris dataset**
2	**Develop a text classification model that can effectively identify, extract features, and classify documents from the 20 Newsgroups dataset into one of the 20 predefined categories using pattern recognition techniques.**
3	**Design a statistical model to analyze wine quality using Gaussian distribution methods. Utilize synthetic data generated with NumPy or the Wine Quality Dataset**
4	**Develop a classification system for handwritten digit recognition using the MNIST dataset, leveraging Bayes' Decision Theory to optimize decision-making and minimize classification error.**
5	**Develop an anomaly detection system for high-dimensional network traffic data using the KDD Cup 1999 dataset.**
1	**Implement a Hidden Markov Model (HMM) to recognize the sequence of weather patterns (e.g., sunny, cloudy, rainy) based on temperature and humidity observations. Use both discrete and continuous HMMs to compare their performance.**
2	**Build a Discrete Hidden Markov Model (HMM) to analyze DNA sequences and predict gene regions. Use Maximum Likelihood Estimation to train the model with a given dataset of labeled sequences**
4	**Create a program that fits a mixture of Gaussians to a dataset of handwritten digit features and clusters them into distinct groups. Use the Expectation-Maximization method to estimate the parameters of the Gaussian mixture model.**
6b	**Use non-parametric K-Nearest Neighbor (KNN) techniques to classify grayscale images of shapes (e.g., circles, squares, and triangles). Evaluate and compare the classification accuracy of both methods.**
7	**Build a Python application to classify iris flowers using the Nearest Neighbor Rule. Use a given dataset with features such as petal length and width. Experiment with different values of K and evaluate the model's accuracy**