MODULE II: Naïve Bayes

Q1. [8M] Explain Bayes theorem and fundamentals, hML and hMAP with an example. [CO4] [L2]

Q2. [8M] Explain the following with examples.

i) Zero probability error ii) Bayes optimal classifier iii) Gibbs Algorithm [CO4] [L2]

Q3. [10M] Analyze different types of artificial neural network with diagrams. [CO4] [L2]

Q4. [10M] Explain Perceptron Learning Theory algorithm. Design a perceptron that performs Boolean AND with the initial weights w1=0.3, w2= -0.2, learning rate α=0.2 and bias θ=0.4. Update the weights until the Boolean function gives the desired output. [CO4] [L2]

Q5. [10M] Analyze Grid based approach and mention the steps of CLIQUE along with advantages and drawbacks. [CO5] [L3]

Q6. [10M] Analyze components of reinforcement learning with a diagram. [CO5] [L3]