

## 1 : Implementing Bayes' Classifier

*Author:* Abijith J. Kamath

*Email:* abijithj@iisc.ac.in

### Introduction

#### 1 Bayes' Classifier in $\mathbb{R}^2$

Problem (1.1) Bayes' Classifier with Gaussian Class Conditionals

Problem (1.2) Bayes' Classifier Trained using Gaussian Mixture Model

Problem (1.3) Bayes' Classifier with Exponential Class Conditional

#### 2 Bayes' Classifier in $\mathbb{R}^{20}$

Problem (2) Bayes' Classifier with Gaussian Class Conditionals

#### 3 Gaussian Mixture Model in $\mathbb{R}$

Problem (3) Bayes' Classifier Trained using Gaussian Mixture Model

#### 4 Naive Bayes' Classifier for Document Classification