

# Deep Learning Assignment 6 Report

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May 18, 2021

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## Introduction

The UCI Iris dataset contains features of 150 iris plants from 3 species. In this homework, Gaussian mixture models were applied to cluster the data points.

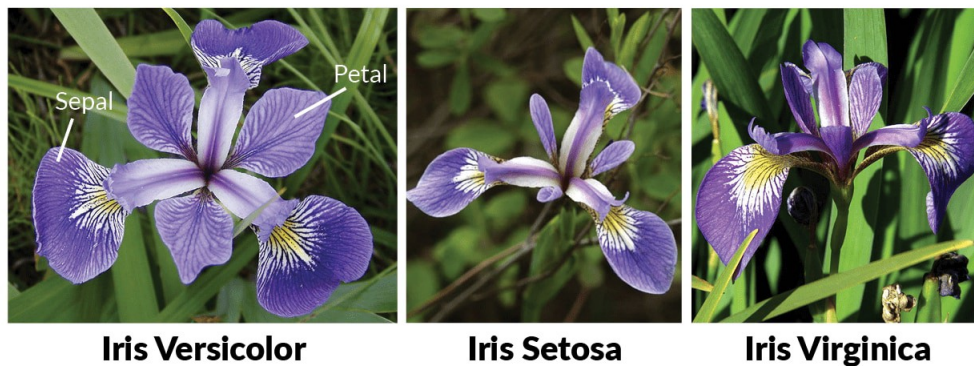


Figure 1: The UCI Iris dataset

## Result

The implementation of Gaussian Mixture Models and E-M Algorithm are shown in attached code. In the initialization step,  $\pi$  was set to equal, Covariance matrix was set to identity matrix and Mean matrix as random. In the visualization step, the Cross Section and PCA Projection are shown below.

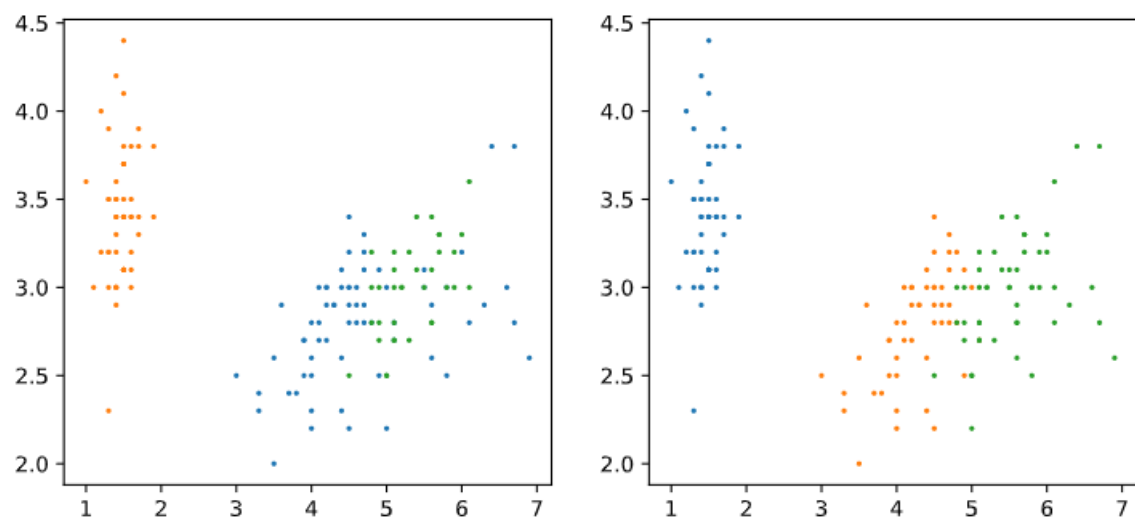


Figure 2: Cross Section

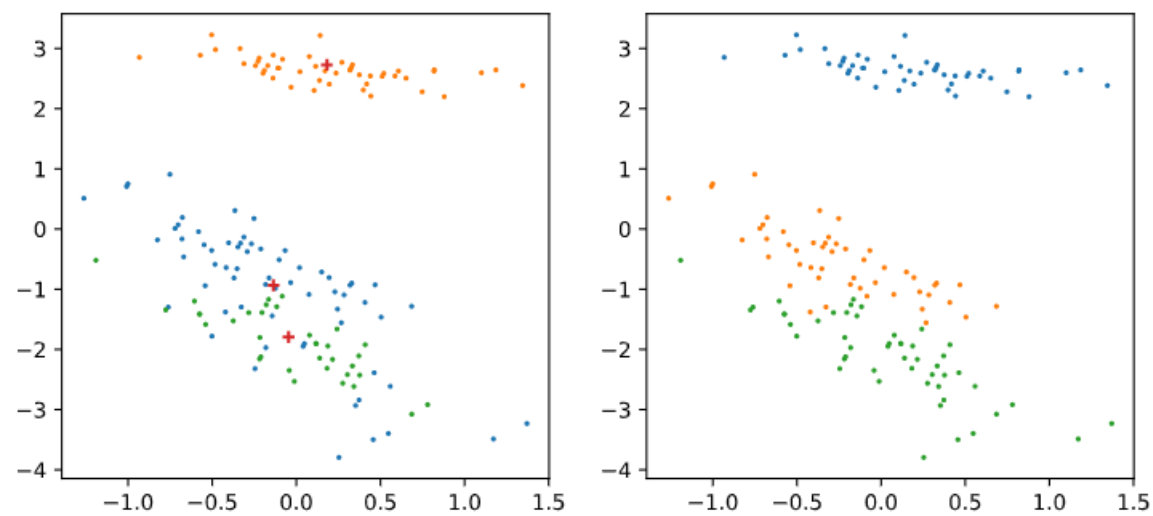


Figure 3: PCA Projection