Project Genuine and Forged Money
Forged Banknotes Recognition

This project aims to build a model capable of distinguishing counterfeit banknotes and genuine banknotes.

For this, it was necessary to analyze four data provided by the bank:

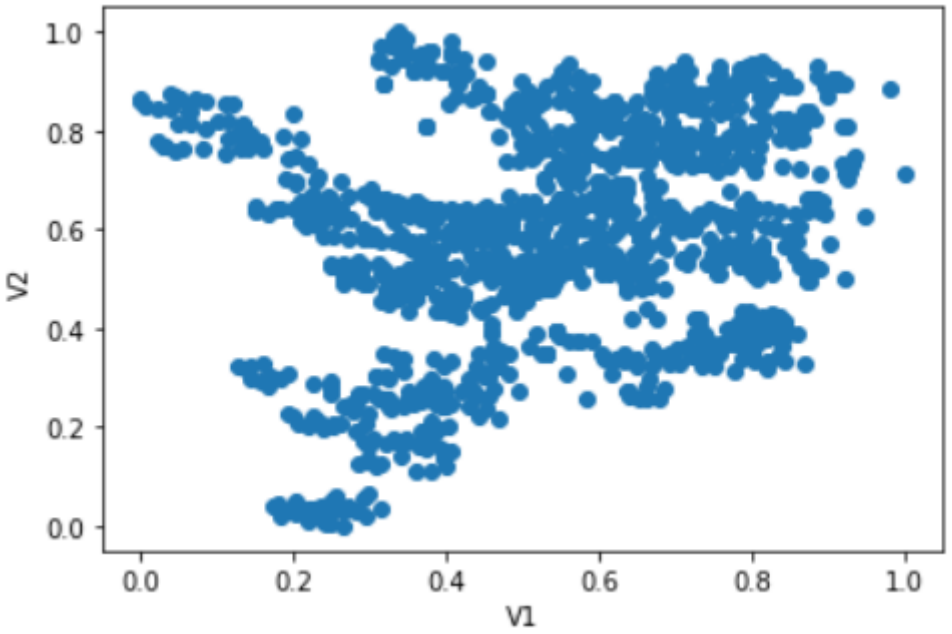
- V1. variance of Wavelet Transformed image (continuous).
- V2. skewness of Wavelet Transformed image (continuous).
- V3. curtosis of Wavelet Transformed image (continuous).
- V4. entropy of image (continuous).

The dataset that has been used includes more than 1000 of banknotes images.

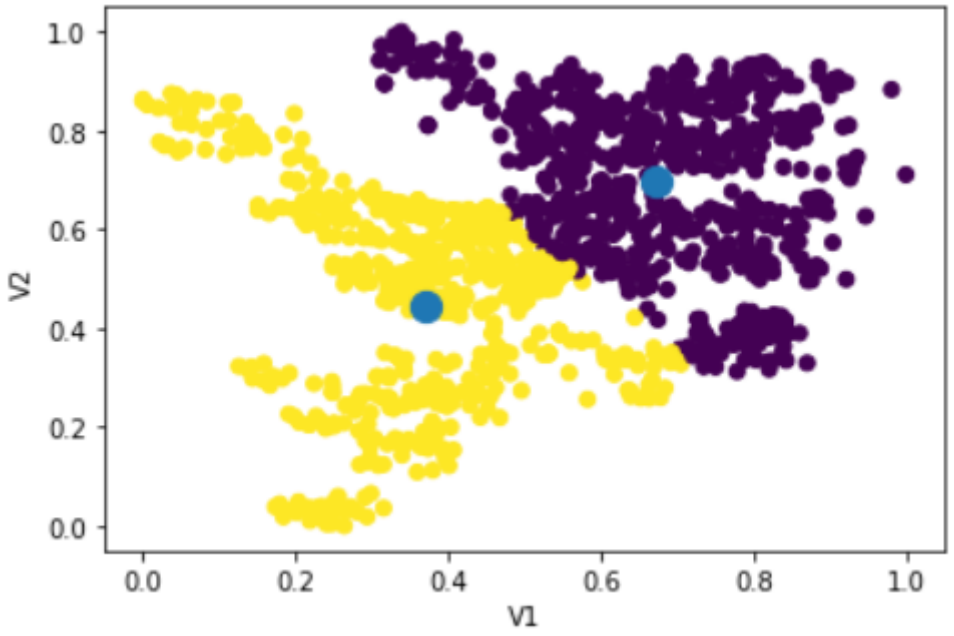
I analyzed the data generating the Means, Standard deviation and the Variance after normalizing the data.

The data were organized using two clusters:

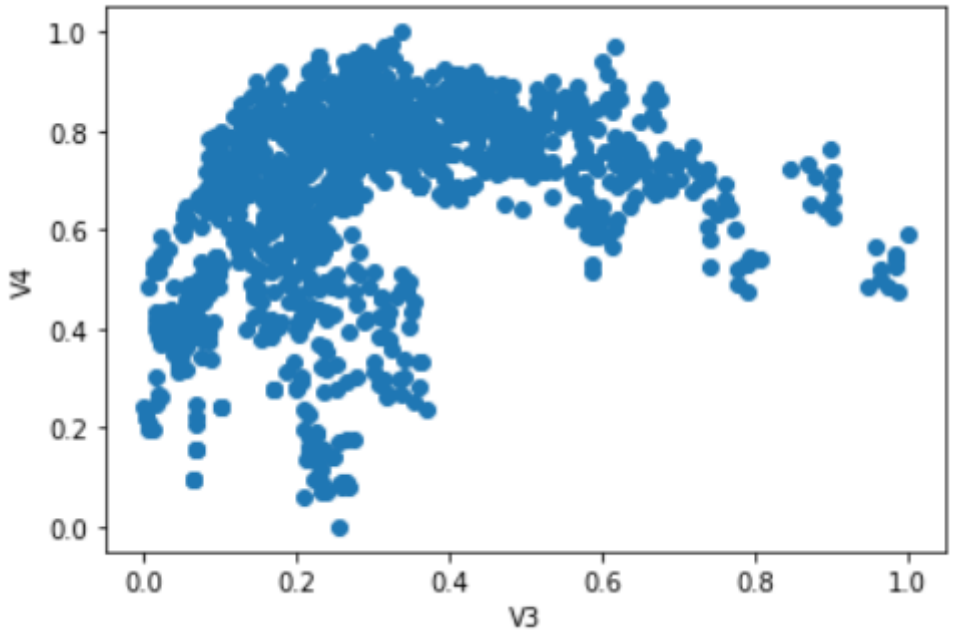
First Graph:



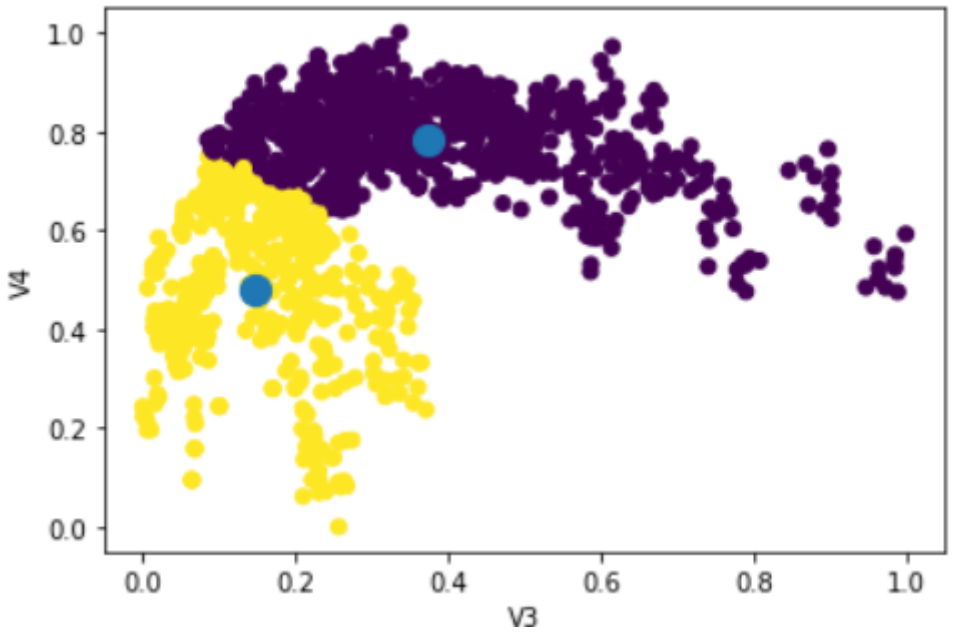
First K Means:



Second Graph:



Second K means:



Results:

The results of the models have a ratio 764\608 to the first model (V1 and V2) and 851/521 to the second model (V3 and V4). The first model is more precise and confiable than the second. For better results it is necessary to have a lot and diverse data.