Multiclass classification model for vote counting
David Lizama

Introduction

I. The objective of this project is to detect the number of votes that each political party received in each section.
II. The model can recognize handwritten numbers from a photo of the total votes of each polling place at the end of the elections.
III. Recognition is useful for accelerating the process of counting votes. It would be possible to get a final result in only a few minutes.
IV. A Gaussian Bayes classifier was used for this purpose.
V. The train and test set had a good performance. Accuracy of 95%.

Tools used

Libraries

- Seaborn, Matplotlib: To plot heatmap and performance of the model.
- Numpy: To manipulate arrays.
- Pandas: To import data and manipulate data frames.
- Multivariate_normal: Import a function to calculate gauss naive.

Training

- 14 models were trained by changing the hyperparameter epsilon.
- Train and test set were preprocessed by using the standardization formula.
- Train and test set had similar performance in each model.
- The best performance was obtained with an epsilon of 0.4.
- Matrix confusion of the test set was plotted with the model chosen.
- Accuracy of 95% in train and test set.