

Machine Learning Project

Bangkit

Metadata & Dataset

Dataset

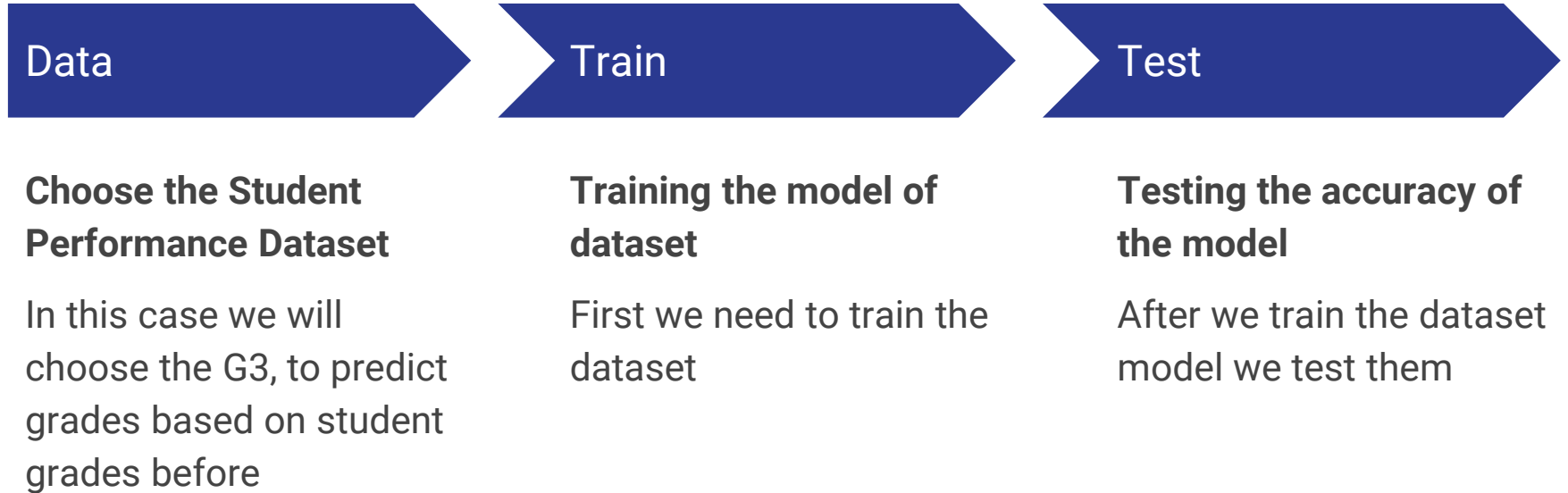
Student Performance Data Set

<https://archive.ics.uci.edu/ml/datasets/Student+Performance>

Metadata

This data approach student achievement in secondary education of two Portuguese schools. The data attributes include student grades, demographic, social and school related features) and it was collected by using school reports and questionnaires. Datasets are provided regarding the performance in two distinct subjects: Mathematics (mat) In [Cortez and Silva, 2008], datasets were modeled under binary/five-level classification and regression tasks. Important note: the target attribute G3 has a strong correlation with attributes G2 and G1. This occurs because G3 is the final year grade (issued at the 3rd period), while G1 and G2 correspond to the 1st and 2nd period grades. It is more difficult to predict G3 without G2 and G1, but such prediction is much more useful (see paper source for more details).

Framing & Hypothesis



Preparation

what do you need for this?

Tensorflow

Anaconda

Pycharm

Pandas

Numpy

Matplotlib

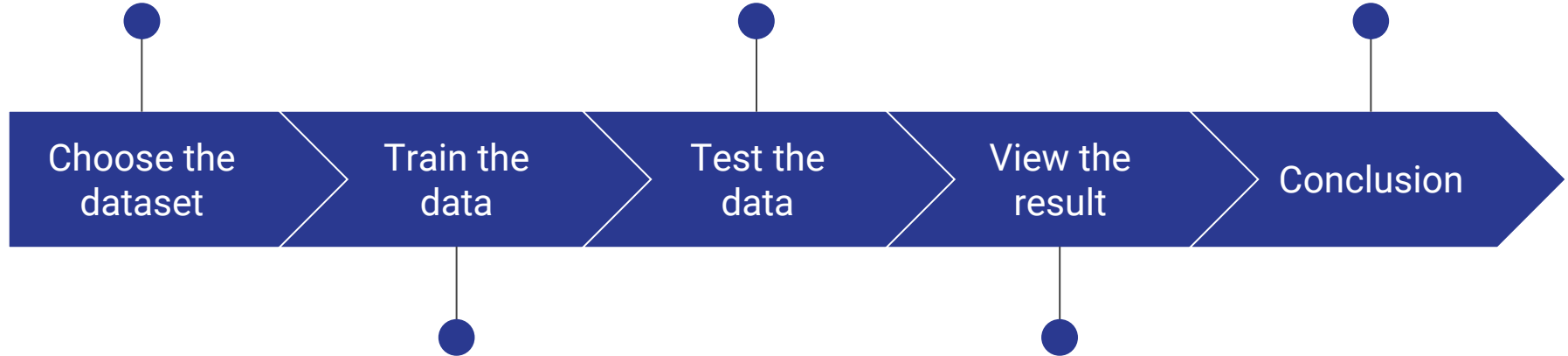


Technique

We use the Student Performance dataset to predict grades based on student grades

After using the best accuracy from the trained data, we test the data prediction

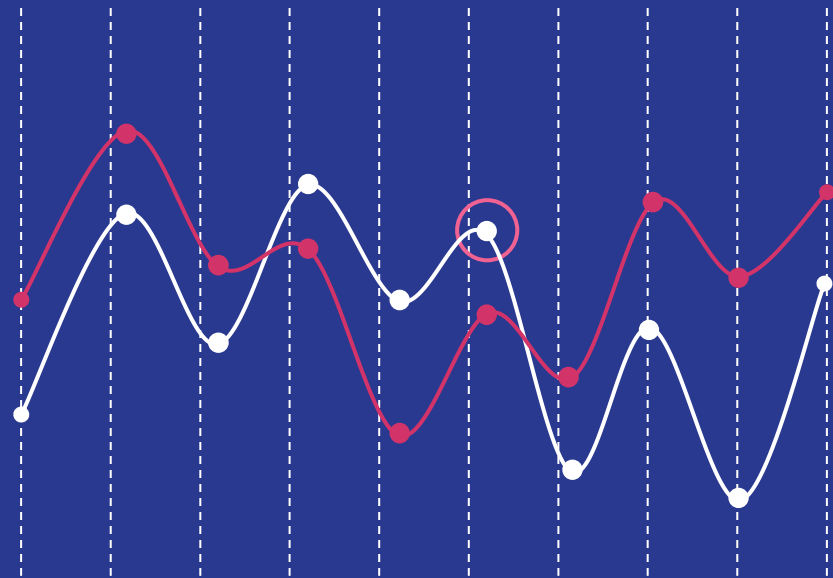
Student grades that will show up the relation between the first grades and the prediction



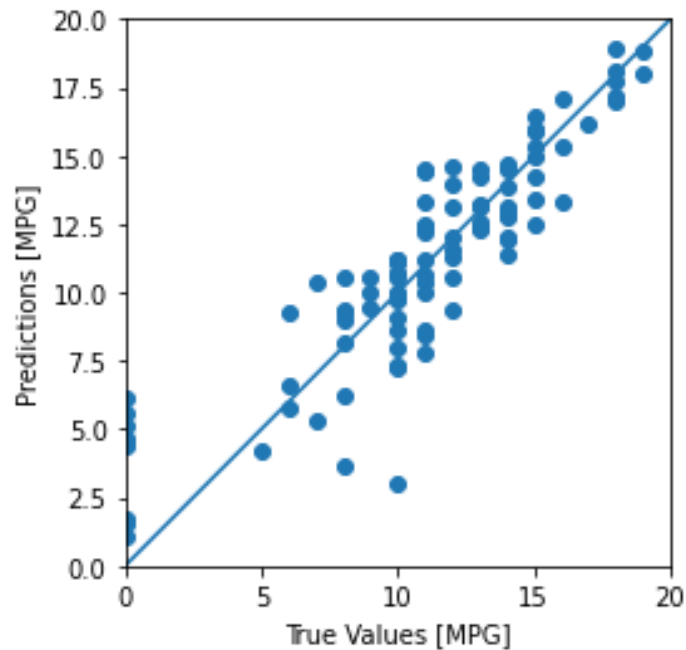
We train the first grades dataset and use the best accuracy

Data predict is shows by the graph of the linear regression graph

Result



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loss: **4.5521**

mae: **1.5696**

mse: **4.4492**

Conclusion

Based on the model we already built, our model did a good job to predict G3 Score. We can see that the value of the testing set mean absolute error, a measure of our model quality, is 1.57. We are therefore able to say that, on average, our model predictions are off by approximately 1.57.

Credits

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