# **Autistic student**

Dataset1(present in shared drive) -[toddler\_data](https://drive.google.com/file/d/1UIZDspBpUi3Upzftf4SB50uyCJXhxmpV/view?usp=drive_link)

No. of rows and columns in the dataset - (1054 , 19)

Dataset2(present in shared drive) -[behaviour\_analysis](https://drive.google.com/file/d/1kEcwh4Ed6ZWHdG5Qc6EsgHZzUc_jUy6q/view?usp=drive_link)

No. of rows and columns in the dataset - (1188 , 20)

Dataset1(present in shared drive) -[child\_data\_2018](https://drive.google.com/file/d/1r8BQ_i_CZXVloHMqn045qn0iOvD_KQgV/view?usp=drive_link)

No. of rows and columns in the dataset - (509 , 24)

Dataset1(present in shared drive) -[child\_data\_2017](https://drive.google.com/file/d/1S0Uh-VutoDNE23UXCpg3Kz_Ndvi0c6kI/view?usp=drive_link)

No. of rows and columns in the dataset - (292, 22)

Note: Please move all your colab notebooks into the code folder of your shared drive and then hyperlink them below. All results into the results folder of your shared drive.

**Data Splitting**

Note: Please mention if missing value imputation and scaling is done or not.

Missing value imputation and Scaling - Yes

Note: If yes, then you have to save the models. Please hyper link them here.

Model - [link](https://drive.google.com/file/d/18-c49dWIfNl2XH277VbAGowlr9mH-Drr/view?usp=drive_link)

Train dataset (train.csv) - [link](https://drive.google.com/file/d/1-8c5i-pxHb-5L4wlo931Wy-5WHUIbHEc/view?usp=drive_link)

Test dataset (test.csv) - [link](https://drive.google.com/file/d/1-7_tKl-28QfkIOmp8Tvek5MvMtla2bXs/view?usp=drive_link)

Code(used for train and test splits) - [[Colab link](https://colab.research.google.com/drive/1IPS-BYEpxtKqp23FLjKcKsI5QYgYLUBu?usp=drive_link)]

**Model Training on**

**KNN, Randomforest,MLP,Decision Tree**

Train code - [link](https://colab.research.google.com/drive/1gYwPhF1fNShNKEqlRafCJXK5GqXHHHFz?usp=drive_link)

Test code - [link](https://colab.research.google.com/drive/1R5OrcamR814AGLwNglZonrEKhRhGJj4v?usp=drive_link)

Results:

Best model (KNN) - [link](https://drive.google.com/file/d/1JmKGz5XVuwqrlhqcSC5PB9gu6vq1Otx8/view?usp=drive_link)

Best model (MLP) - [link](https://drive.google.com/file/d/1-BZ2i4NwTGGOkp1Blu5ipSZ5sFl6T0hO/view?usp=drive_link)

Best model (Random Forest) - [link](https://drive.google.com/file/d/1-AADkyNUMn2SDuVh_JQTSHhaA2FBmrp6/view?usp=drive_link)

Best model (Decision tree) - [link](https://drive.google.com/file/d/1-701rMi_iBV_a48dwfGGNzipTLUtJnz0/view?usp=drive_link)

MLP Accuracy - 0.99296875

KNN Accuracy - 0.80625

Decisiontree Accuracy - 0.94375

Randomforest Accuracy - 0.94921875

Results on test data:

KNN Accuracy - 0.8162

MLP Accuracy - 1.0

Decisiontree Accuracy - 0.96885

Randomforest Accuracy - 0.95016

**Images/Plots/Graphs**

MLP Accuracy Plot-[MLP Accuracy Plot.png](https://drive.google.com/open?id=1CldFdfJdv40cvXxLgxFqQSkAjodxqHFA&usp=drive_copy)

Decision Tree Accuracy Plot-[Decision Tree Accuracy Plot.png](https://drive.google.com/open?id=18isfUaeILxvb2x8bdRnT_cAwL_VUBjX2&usp=drive_copy)

KNN Accuracy Plot-[KNN Accuracy Plot.png](https://drive.google.com/open?id=1xnQSPqbgnsexawYuq-SmYz_OVeRqttpS&usp=drive_copy)

Random forest Accuracy Plot-[Random Forest Accuracy Plot.png](https://drive.google.com/open?id=1Ebh_gGi28jvcdFbNSL3WSnZ-gJ2KADzU&usp=drive_copy)

**Confusion Matrix**

Random Forest-[Random Forest Confusion metrics.png](https://drive.google.com/open?id=1BKWiDDHsSuiIggaZT7jqbEEjcu_NP23f&usp=drive_copy)

MLP-[MLP Confusion metrics.png](https://drive.google.com/open?id=1noK0ldyQUkvejKnQXe11tAaan_6B116b&usp=drive_copy)

KNN-[KNN Confusion metrics.png](https://drive.google.com/open?id=1bw95n5yqyoW6-BYhwS30MQ6TDTdFhvy_&usp=drive_copy)

Decision Tree-[Decision Tree Confusion metrics.png](https://drive.google.com/open?id=1oa65Bbzbv1nsGSKHZItOwPkSDJO_Bvm-&usp=drive_copy)

|  | Accuracy with hyperparameters |
| --- | --- |
| KNN |  |
| MLP |  |
| Decision Tree |  |
| Random Forest |  |