Results on three splits of the raw data

Splits can be found at: link and their division code here: notebook link

Fine Tuning on Tiny-bert and DeBERTav3: Classification task on age ranges: 2-3, 3-5, 5-6.

Tiny-Bert Classification:

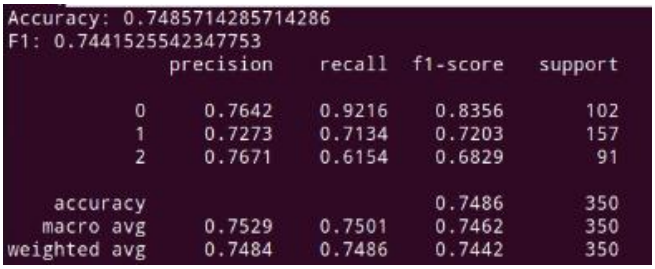
Details for metrics on classes could be found in notebook: TinyBERT classifier

	Split 1	Split 2	Split 3	Average
Accuracy	0.69	0.71	0.68	0.69
F1	0.68	0.71	0.69	0.69

DeBERTav3 Classification:

The code .py file could be found in the repo: DeBERTav3 Classification

Split1:

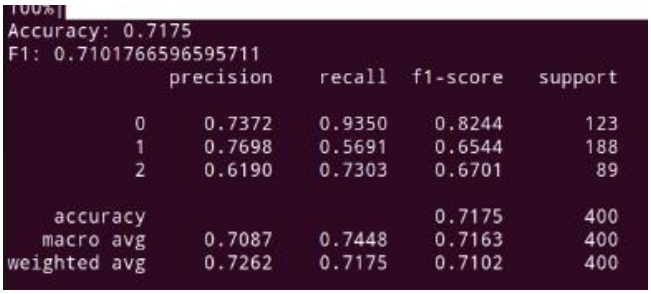


```
Accuracy: 0.7485714285714286
F1: 0.7441525542347753
              precision    recall  f1-score   support

           0     0.7642    0.9216    0.8356       102
           1     0.7273    0.7134    0.7203       157
           2     0.7671    0.6154    0.6829        91

    accuracy                         0.7486       350
   macro avg     0.7529    0.7501    0.7462       350
weighted avg     0.7484    0.7486    0.7442       350
```

Split 2:

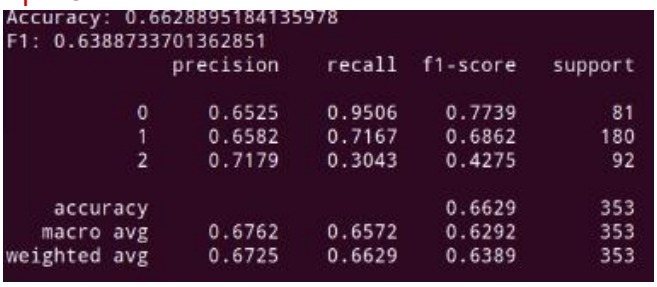


```
Accuracy: 0.7175
F1: 0.7101766596595711
              precision    recall  f1-score   support

           0     0.7372    0.9350    0.8244       123
           1     0.7698    0.5691    0.6544       188
           2     0.6190    0.7303    0.6701        89

    accuracy                         0.7175       400
   macro avg     0.7087    0.7448    0.7163       400
weighted avg     0.7262    0.7175    0.7102       400
```

Split 3:



```
Accuracy: 0.6628895184135978
F1: 0.6388733701362851
              precision    recall  f1-score   support

           0     0.6525    0.9506    0.7739        81
           1     0.6582    0.7167    0.6862       180
           2     0.7179    0.3043    0.4275        92

    accuracy                         0.6629       353
   macro avg     0.6762    0.6572    0.6292       353
weighted avg     0.6725    0.6629    0.6389       353
```

	Split 1	Split 2	Split 3	Average
Accuracy	0.75	0.72	0.66	0.71
F1	0.74	0.71	0.64	0.7

Fine Tuning on Tiny-bert as a Regression task (regressor head):

Code notebook: Regression_BERT

	Split 1	Split 2	Split 3	Average
RMSE	9.01	8.75	8.99	8.91
MAE	7.17	6.94	7.15	7.09
R2	0.59	0.617	0.548	0.58

Gemini LLM API Embeddings + classical ML algorithms:

Notebook: Embeddings and LLM

Embeddings were saved as pkl files at: Google Drive Link

Results are in the following format: [MAE, RMSE, R^2]

(MAE and RMSE were denormalized to give significant metrics in Months).

	Random Forest	LightGBM	CatBoostRegressor	CatBoost + PCA
Split 1	[8.31, 9.83, 0.513]	[6.99, 8.78, 0.612]	[6.78, 8.41, 0.64]	[6.80, 8.61, 0.63]
Split 2	[8.22, 9.76, 0.523]	[7.05, 8.90, 0.604]	[6.73, 8.44, 0.64]	[6.60, 8.21, 0.66]
Split 3	[7.97, 9.46, 0.5]	[6.82, 8.44, 0.601]	[6.6, 8.10, 0.63]	[6.26, 7.90, 0.65]
Average	[]	[]	[]	[]