

```
04 Model training — -zsh — 111x25
~/Documents/FYP/04 Model training — -zsh  ~/Documents/FYP/03 Classifier APIs — -zsh  ...ts/FYP/01 Data Collection/02 Extra_features/01 Data Crawl — -zsh
Q time_between_first_and_last_tx
'time_diff_between_max_balance_and_last_tx', 'time_between_first_and_last_tx']

** Building the Model...

** Model Accuracy Precision Recall F1 Macro_Precision Macro_Recall Macro_F1 W
eighted_Precision Weighted_Recall Weighted_F1

LogisticReg 0.8054 0.8532 0.6450 0.7344 0.8184 0.7826 0.7904 0.8126 0.8054 0.7996

RF 0.9585 0.9612 0.9385 0.9496 0.9590 0.9556 0.9572 0.9586 0.9585 0.9584

libc not found. The ctypes module in Python 3.8 is maybe too old for this OS.
KNN 0.8923 0.8817 0.8574 0.8692 0.8908 0.8874 0.8888 0.8923 0.8923 0.8921

XGBoost 0.9703 0.9694 0.9591 0.9642 0.9702 0.9687 0.9694 0.9703 0.9703 0.9702

LightGBM 0.9727 0.9692 0.9653 0.9672 0.9722 0.9716 0.9719 0.9727 0.9727 0.9727

SVM 0.8188 0.8541 0.6828 0.7587 0.8277 0.7995 0.8068 0.8234 0.8188 0.8148

** Results of Best Model (LightGBM) **

Found `n_estimators` in params. Will use it instead of argument
```

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...ts/FYP/01 Data Collection/02 Extra_features/01 Data Crawl — -zsh

Q time_between_first_and_last_tx

```
** Building the Model...

** Model          Accuracy          Precision          Recall   F1          Macro_Precision Macro_Recall      Macro_F1      W
   eighted_Precision      Weighted_Recall Weighted_F1

LogisticReg      0.8466  0.8633  0.7518  0.8036  0.8502  0.8332  0.8389  0.8481  0.8466  0.8447

      RF      0.9573  0.9587  0.9381  0.9483  0.9575  0.9546  0.9559  0.9573  0.9573  0.9572

libc not found. The ctypes module in Python 3.8 is maybe too old for this OS.
      KNN      0.9085  0.9056  0.8719  0.8884  0.9081  0.9033  0.9054  0.9085  0.9085  0.9082

      XGBoost      0.9691  0.9689  0.9567  0.9627  0.9691  0.9673  0.9681  0.9691  0.9691  0.9690

LightGBM      0.9705  0.9674  0.9618  0.9646  0.9701  0.9693  0.9697  0.9705  0.9705  0.9705

      SVM      0.9020  0.9203  0.8379  0.8770  0.9057  0.8929  0.8978  0.9032  0.9020  0.9012

** Results of Best Model (LightGBM) **

Found `n_estimators` in params. Will use it instead of argument
Training until validation scores don't improve for 5 rounds
```