OFFLINE SIGNATURE FORGERY DETECTION

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AIM

This project aims to automate the process of identifying genuine and forged signatures by building models with a minimum error that is often the case while performing manual verification.

METHODOLOGY

Methods used in this project are:

- Vanilla SVM
- PCA + SVM
- Sequential model
- Ensemble learning – Boosting

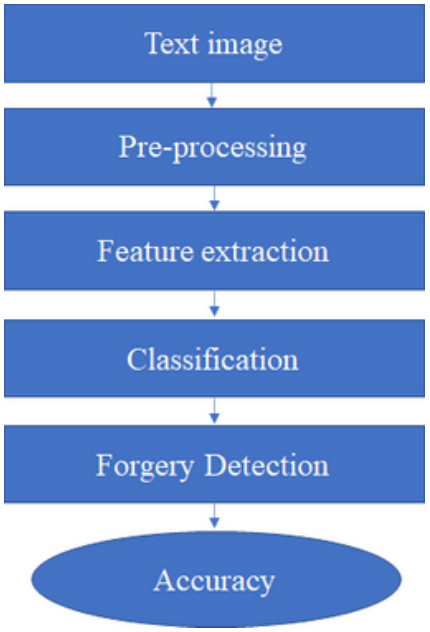
DATASET

"Handwritten signatures" dataset. Contains 1021 files. contains 30 people's genuine and forged signatures.

TECHNOLOGY STACK

- Python 3.6
- Numpy
- Pandas
- Keras
- Scikit-learn

FLOW DIAGRAM



RESULTING ACCURACY

- Sequential model - 90.0
- SVM - 97.77
- PCA + SVM - 80.7
- Gradient Boosting loss - 14.2

REFERENCES

TaraggyMghanim and Ayman MNabil, "Offline Signature Verification and Forgery Detection Approach", IEEE 2018 – base paper.

CONCLUSION

The SVM's accuracy is more as compared to the other because our dataset is comparatively small.