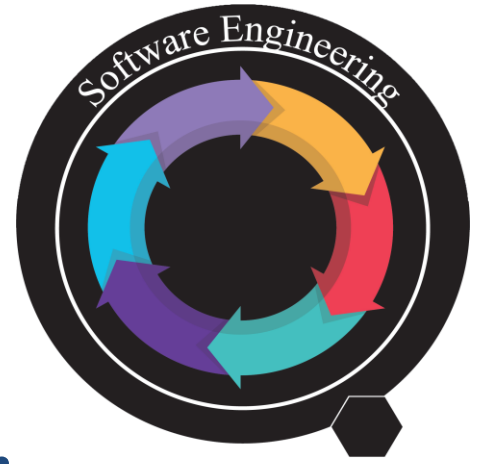




# INSCRIPTIFY

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## Abstract

InScriptify is a web-based tool for automatic handwriting and signature analysis using Siamese Neural Networks. It supports writer identification, signature verification, and forgery detection with high accuracy, reducing manual effort and enabling scalable evaluation.

## Introduction

Traditional handwriting and signature checks are slow and error-prone. Rule-based systems also lack accuracy. InScriptify addresses this by automating the process with Siamese Neural Networks, offering faster and more consistent results.

## Company Info

InScriptify automates writer and signature verification for institutions. It eliminates manual review, supporting faster and more consistent workflows in forensic labs, courts, notary offices, and public institutions.

## Solution

InScriptify automates handwriting and signature analysis using a Siamese Neural Network with EfficientNet-B0. Inputs are split into word-level crops and compared via cosine similarity. In Matching, two documents are compared pairwise. In Verification, the input is checked against all authors in the database. Signature mode compares embeddings of two signature images. Forgery Detection matches the input only with a selected user's reference data. Final decisions are made based on average similarity.

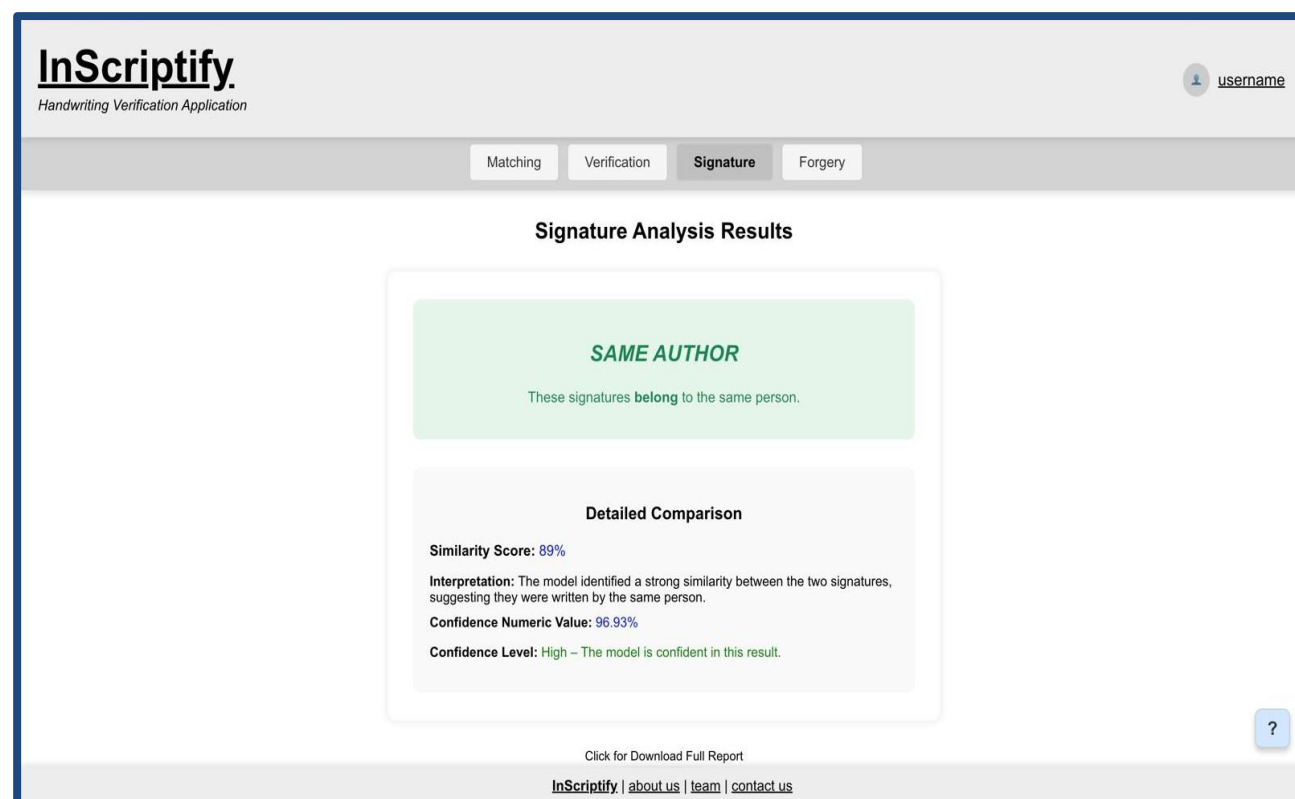
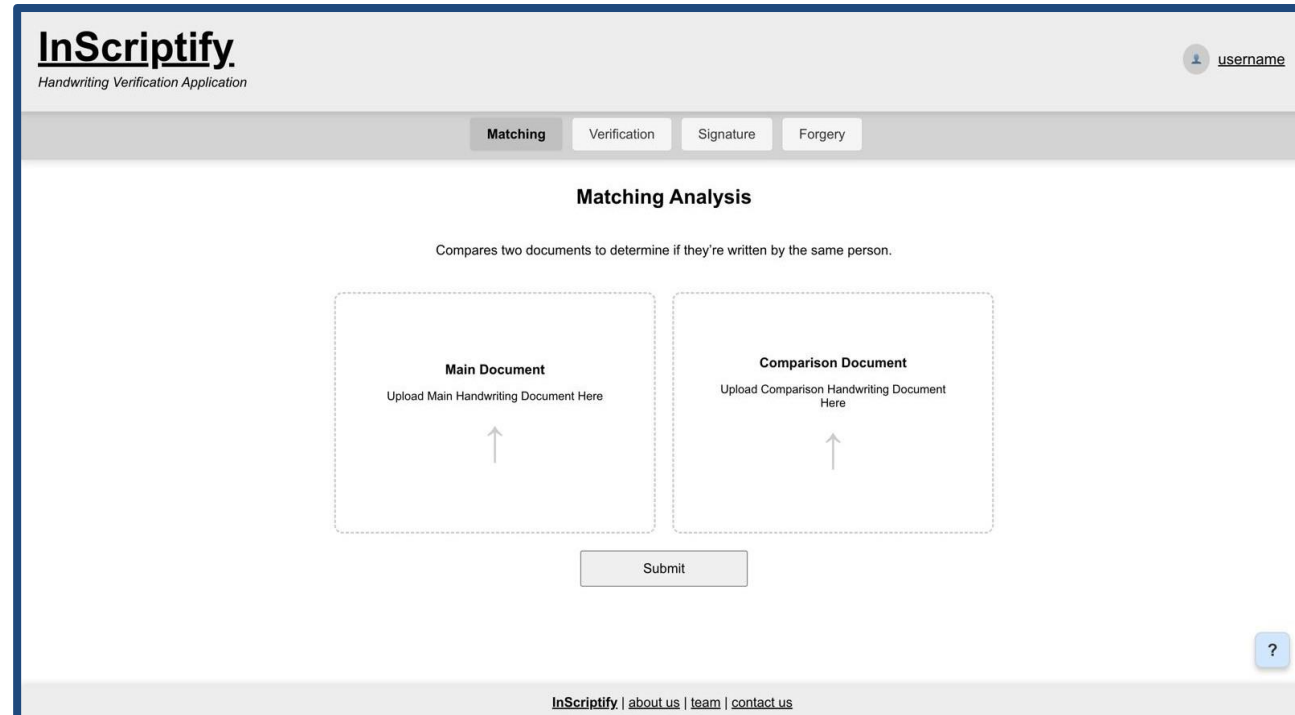


Figure 2 – Finished Product

### InScriptify - Simplified User Flow

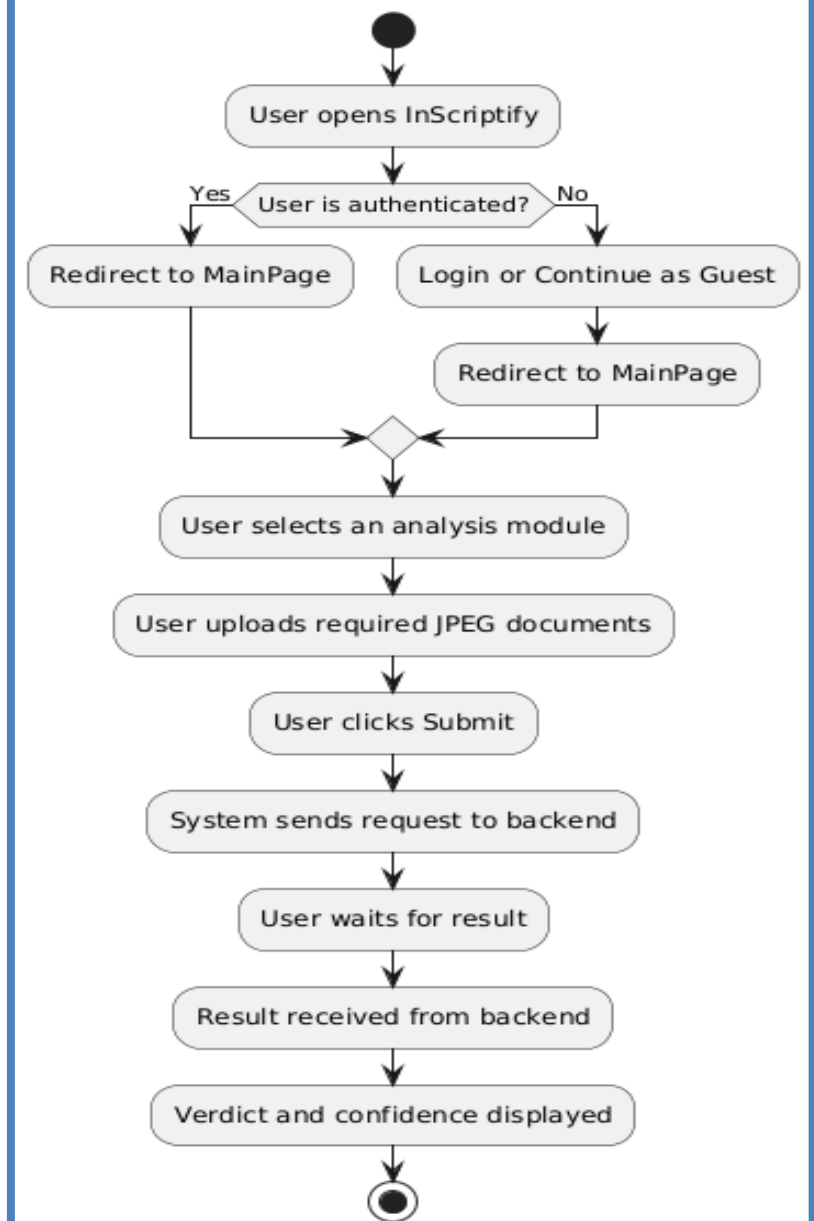


Figure 3 - Flowchart

## Results & Conclusion

InScriptify successfully integrates document upload, segmentation, embedding extraction, and similarity comparison. Among the modes, signature verification achieved the highest accuracy. Threshold values were determined through ROC-based tuning. While the system handled real-world inputs effectively, challenges such as crop imbalance and borderline similarity scores highlighted key design trade-offs. Overall, it provided consistent results, responsive interaction, and reliable performance across tasks.

## Acknowledgement

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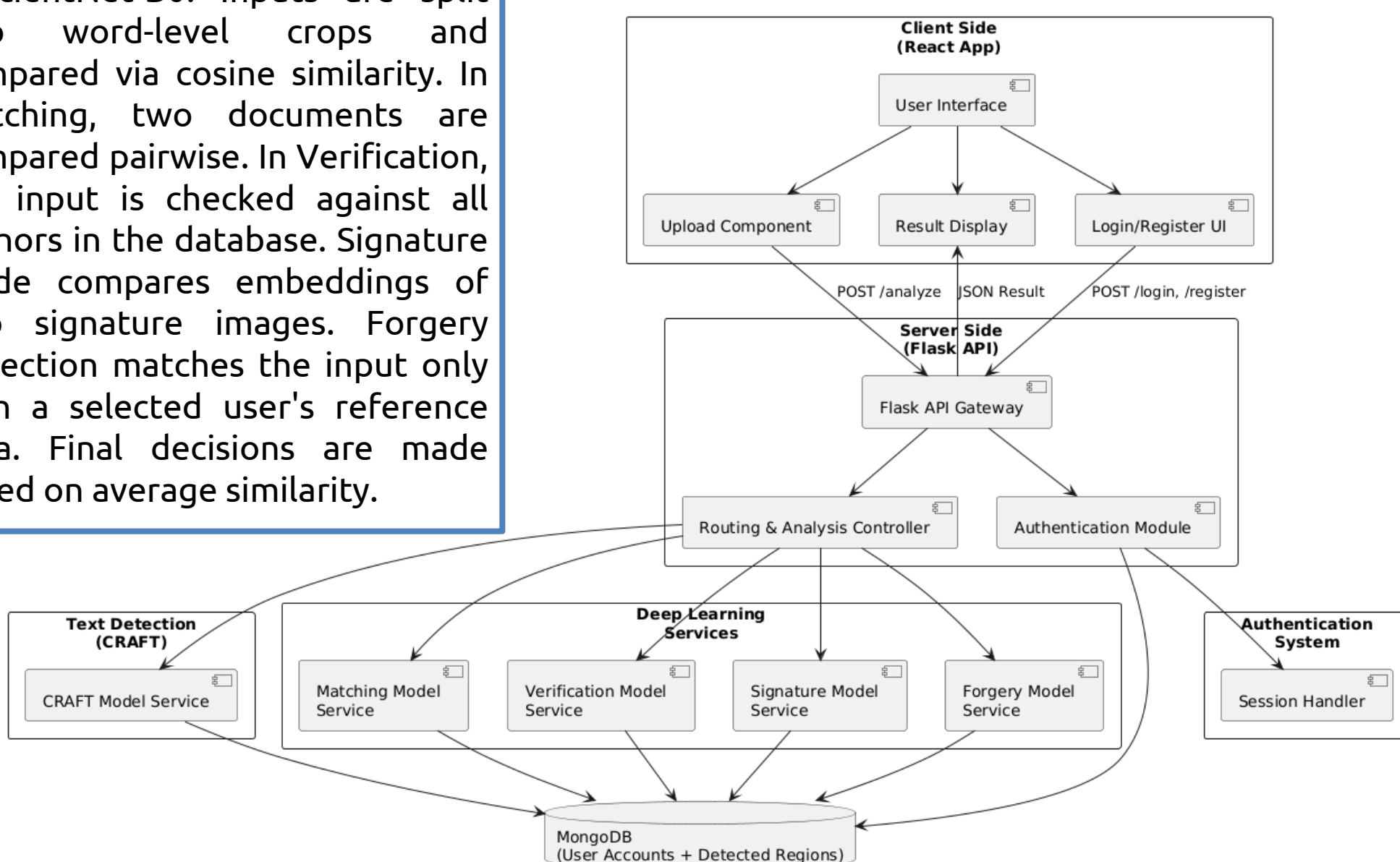


Figure 1 – Architecture Diagram

