



HumanAlze Hackathon  
«FinTech Edition»



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# ENHANCED KNOW YOUR CUSTOMER (KYC)

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REVOLUTIONIZING CUSTOMER IDENTITY VERIFICATION FOR  
FINANCIAL INSTITUTIONS



# Problem Statement

- To develop and showcase an advanced AI-powered solution that revolutionizes the Know Your Customer (KYC) process, significantly enhancing efficiency, security, and the overall customer experience and reduce risk to frauds within the financial services industry.
- This innovative approach aims to streamline operations and deliver a seamless, secure onboarding journey for clients, setting a new standard for excellence in customer verification and risk management.

# Key Features

1

## User Authentication

Implement secure registration and login with JWT by validating passwords, and verifying tokens.

2

## Document Verification

Extract and verify text from documents using OCR by scanning, processing and validating the extracted text.

3

## Biometric Verification

Match user selfies with ID photos using facial recognition by analyzing and comparing facial features from both images.

4

## Risk Assessment

Assess user risk profiles using machine learning by analyzing user data, identifying patterns, and predicting potential risks.

5

## Admin Dashboard

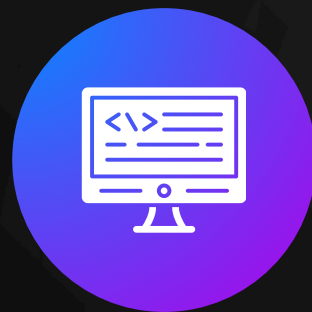
Review KYC applications and verification results by evaluating submitted documents, cross-checking information, and confirming compliance with regulatory requirements.

6

## AI-driven Customer Support

Personalised AI-driven chatbot for customer assistance and provide support to the users

# Technology Stack



## Frontend

- React
- Material UI
- Bootstrap
- Tailwind



## Backend

- Node JS
- Express
- Flask



## ML Tools/Libraries

- Python
- OpenCV (for image processing)
- Tesseract (for OCR)
- dlib (for facial recognition)
- scikit-learn (for risk assessment)







# Proposed Solution

1. **Customer Form Submission:** Customers fill out a KYC update form with required details (name, date of birth, address, etc.).
2. **Document Upload:** Customers upload scanned copies or photos of Aadhar card and PAN card.
3. **AI Document Verification:** Use image processing and OCR to extract and verify data from uploaded documents.
4. **Fraud Detection:** Utilize facial recognition to match Aadhar card photo with a selfie provided by the customer.
5. **Verification Outcome:**
  - If all verifications pass (photo match, data consistency), mark KYC process as completed.
  - Notify authorities or initiate further verification for discrepancies found.



Future Scope...

# Future Scope

## Real-time Verification

Speed up verification processes

## Multi-Language Support

Add internationalization

1

2

3

4

5

## Advanced Fraud Detection

Implement anomaly detection algorithms

## Advanced AI-driven Customer Support

Implement advanced chatbots trained for this domain

## Blockchain Integration

Secure and immutable record-keeping



# THANK YOU

For watching this presentation.

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*Aarya Gopani*

*Vedant Patel*