



CREOX

UNLOCKING THE FUTURE OF CREDENTIAL MANAGEMENT

TECH TRIAD

MAHATHI SRI
JAZILA BEGUM
MONIKA





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PROBLEM STATEMENT

In today's digital era, certificate forgery and credential fraud have become major concerns for educational institutions, employers, and regulatory bodies. Fake degrees and manipulated certifications make it difficult to verify an individual's qualifications, leading to misrepresentation, loss of trust, and hiring risks.



O2

TECH STACK

- ◆ AI & Natural Language Processing (NLP)
- ◆ Machine Learning: Scikit-learn, TensorFlow
- ◆ Backend: Python (Flask/Django)
- ◆ Frontend: React.js, HTML, CSS
- ◆ Database: MySQL
- ◆ QR Code & API: Python QRCode, FastAPI/Flask REST API
- ◆ Cloud & Deployment: Firebase

METHODOLOGY



AI VERIFICATION

font consistency, signature match, and content authenticity.



SECURE STORAGE

ensures tamper-proof and decentralized verification.



CHECKS AUTHENTICITY

employers/Institutions scan the QR code or use an API to verify authenticity.





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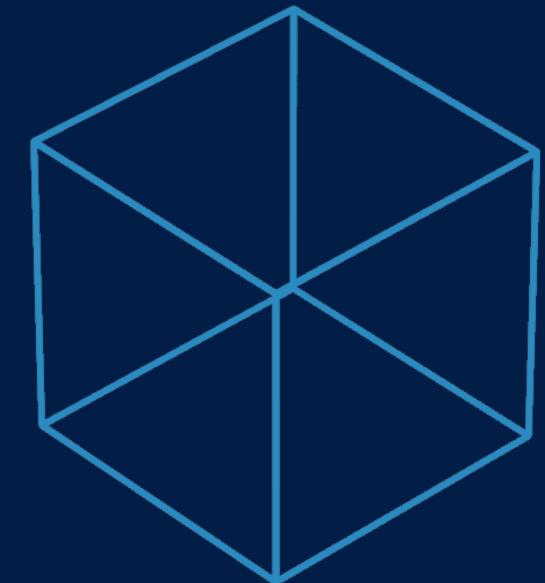
OVERVIEW

- ◆ Certificate Upload & OCR Extraction (Extracts text using AI)
- ◆ AI-Based Authentication (Analyzes fonts, signatures, content)
- ◆ Blockchain-Based Verification (Tamper-proof storage)
- ◆ QR Code-Based Verification (Easy validation)
- ◆ Fraud Detection System (AI detects forged certificates)
- ◆ API for Third-Party Verification (Employers & universities can integrate)



CHALLENGES

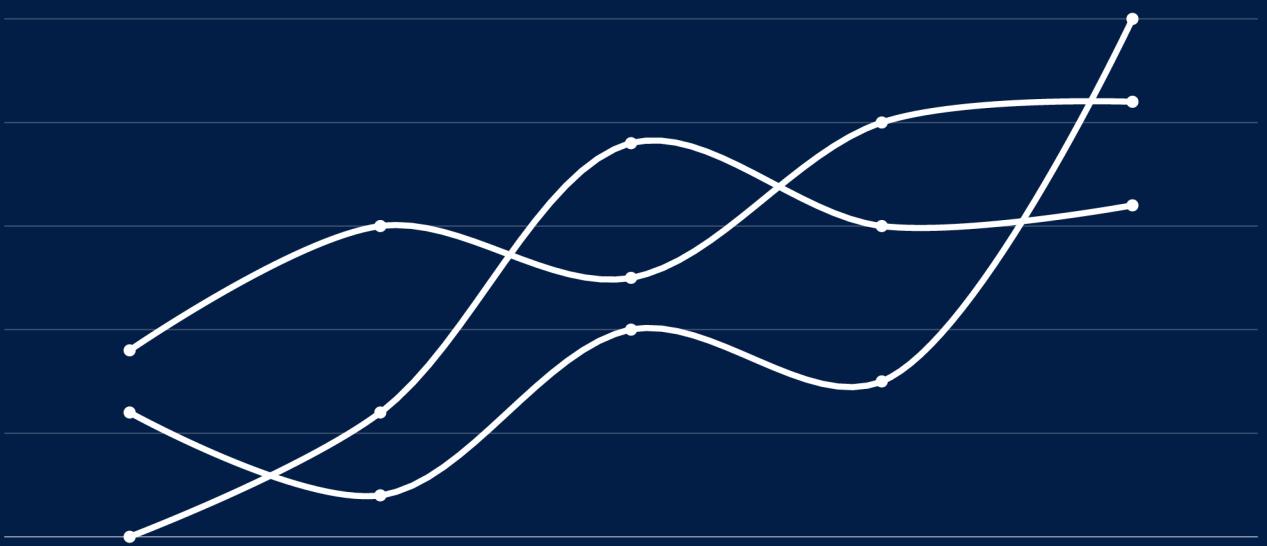
1. OCR Accuracy Issues
 - ◆ Poor image quality affects text extraction.
2. Detecting Advanced Forgeries
 - ◆ Fake certificates mimic real ones.
3. Fast & Accurate Verification
 - ◆ Manual checks are slow, AI must be precise.



OS

SOLUTION

- ◆ AI-Powered Certificate Verification
- ◆ Automated Fraud Detection
- ◆ QR Code-Based Instant Verification
- ◆ Seamless API Integration



FUTURE DIRECTIONS

- ◆ Enhancing AI Accuracy
- ◆ Mobile App Integration
- ◆ Integration with Educational Institutions
- ◆ Scalability & Performance Optimization
- ◆ Multi-Language Support



THANK YOU