

Automated Aadhaar and Smart card verification using Image Processing
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Abstract—The creation of an automated system for Aadhaar and smart card identification is required due to the growing need for precise and effective identity verification in government benefit programs and financial services. In government loan waivers, manual verification procedures are inefficient due to clerical errors, delays, and fraudulent activity. In order to ensure accuracy, security, and the avoidance of fraud, this project suggests a sophisticated system that uses image processing and machine learning to automate the extraction and verification of identifying details. The technology uses high-resolution pictures of smart cards and Aadhaar. To improve clarity, these photos are pre-processed using methods like skew correction, and noise reduction. Key textual information, such as the Aadhaar number, name, and birthdate, is then extracted using optical character recognition (OCR). In order to verify the authenticity of the cardholder's identification. The extracted data is crosschecked with official government databases to further improve security and removing false claims.

Key words: aadhaar card verification; smart card verification; optical character recognition(OCR); image processing; fraud detection