

Academic Credit Authenticity Tester (ACAT)



1. Features/Operation

1. Allow uploading document/s by Educational Institute

1. Educational Institute can upload new or old issued Academic Credits separately or in Bulk.
2. Extract **Graphical Information** such as Signature, Photos, Logo, Stamp etc from uploaded document.
3. Extract all readable text using sophisticated **OCR** system and parse it into computer readable format.
4. Generate Unique Identification Key **UIK** and generate a Scanable and Printable image which can be printed or stucked on the original valid document.
5. Store extracted graphical informations securely, safely and in immutable way.
6. Store extracted text information and generated identification key into hybrid bloc-chain based database.

2. Allow Employers/Institutes/Individuals to verify authenticity of an Academic Certificate

1. User can Upload the document through the **website portal** or Scan through **Mobile App** for verification of the Document
2. Extract Graphical Information such as signature, face, logo, stamp etc from the test documents and verify if similar graphical entry exists in the database and Issue Alert if document is tampered eg check if face/signature/stamp/logo is changed.
3. Issue Alert highlighting the tampered part or region.
4. Scan readable text from the document and parse it into computer readable form using **AI Model** the readable text and generate it's **UIK** and cross verify with changed entries such as increased marks from the one already in database.
5. Issue Alert Highlighting the tampered entries in the document

3. Allow Admin to Access Detailed and Statical information of Usage and Caught Fraudulent Documents

2. Effectiveness In Solving the Problem

1. Automatic Digitalization of old documents and store in immutable fashion.
2. Can detect fake signature, face, stamp, logo etc
3. Can detect fake entries such as increased marks
4. Fast verification Process
5. Easy to use design save cost of training staff and make adoption easy
6. Keeps track of Fraudulent Documents

2. Software Components and Structural Diagram

1. **Web API:** for Easily, Securely, Platform-Independent Access aka web portal
2. **Image Processing System:** For extraction, storage and verification of graphical information
3. **Sophisticated Image OCR Engine with integrated Image Processing System:** for Extraction of text data/entries automatically
4. **AI model:** for automated parsing of human readable text into Computer Readable format without manual labor
5. **Unique Identity Key Generator:** for generating unique key based on all information of the entries in the document
6. **Hybrid Block-chain based Database Management System:** for storing data in immutable manner
7. **QR encode/decode System:** for generating and reading printable UIK for quick verification

