Inter-State Student Verification Portal

Prathmesh Raut[1], Shantanu Hulwan[2], Shivam Jadhav[3] and Palash Lanjewar[4]

[1,2,3,4] *Dr. J J Magdum College of Engineering, Jaysingpur*

Abstract: In India, students frequently migrate between states for education. The existing systems lack a centralized mechanism for verifying student credentials, leading to inefficiencies and potential fraud. This project proposes the development of an Inter-State Student Verification Portal (ISSVP) to streamline the verification process, improve accuracy, and reduce administrative burdens. Utilizing modern technologies like secure databases and APIs, the portal will provide real-time, seamless access to verified academic records across states. This study outlines the portal's design, features, and potential impact on education and scholarship distribution.

I. INTRODUCTION

The Inter-State Student Verification Portal (ISSVP) is designed to address the challenges faced by out-of-state students in accessing scholarships and academic verifications. Currently, verification processes are manual, fragmented, and time-consuming. By creating a centralized, automated platform, this project seeks to enhance efficiency, reduce errors, and foster transparency. The current verification process is often manual and time-consuming, involving multiple levels of paperwork, which can lead to delays in admissions and employment opportunities. This system is proposed to automate the verification process by creating a centralized portal that allows institutions and employers to authenticate student details seamlessly. It not only reduces the paperwork but also minimizes the risk of document fraud. This project utilizes modern technologies, such as secure databases and web-based platforms, to ensure that student data can be accessed and verified by authorized personnel in real-time. The portal will serve as a bridge between different states' education systems, ensuring uniformity and transparency in the student verification process across the country.

II. UNITS

Throught out the Project we are not going to use any predefined primary units. Because there are no fixed numbers of benefits available to each students, in portal schemes or benefits varied according to the student eligibility and on other factors also. But for our understanding we are going to use English mixed unit for reference. For example, 15 schemes/student (i.e. There are 15 scholarship schemes on average is available for that student in particular region (if selected)). Other factors which can be like student age, Caste, whether or not there is gap in between studies, family income certificate, Caste Validity (if Caste Applicant), in family how many other children's also getting benefits of the scheme, etcetera.

III. HELPFUL HINTS

A. Literature Review

The verification of student credentials is a critical process in educational institutions and workplaces. Over the years, various systems have been developed to automate document verification, with digital records gaining popularity in many countries. Despite the advancements, India still faces challenges due to its vast, decentralized education system that varies from state to state.

Several studies emphasize the importance of centralized student verification systems. For instance, Kumar et al. (2022) propose a database with RESTful APIs for scholarship eligibility verification, while Singh et al. (2021) explore blockchain-based solutions for secure student records. However, India lacks an integrated, cross-state system. Existing platforms like DigiLocker(an Indian Government Registerd Application) address storage but not cross-state interoperability.

3.1. Problem Definition:

To develop a technical solution for enabling Institution level verification of students of one State studying in other State/s, who are at present generally denied benefits under the Scholarship scheme as the Institutions in which they are studying are not registered on the portal/s of their home State.

3.2 Proposed Experiment Work:

1. *Objective*: -The main aim is to develop and test a web-based portal that enables seamless student

identity verification across different states in India. This system will help colleges, universities, and government bodies to verify student credentials efficiently and accurately.

2. *Hypothesis*: -A centralized online verification portal will reduce the time and errors in verifying students from different states, ensuring transparency and improving the overall admission process.

3. *Methodology*: -

1. *System Development*:

Design and develop the Student Verification Portal using technologies such as HTML, CSS, JavaScript (for frontend), and PHP/MySQL (for backend). Include essential features like student registration, document submission, and verification status tracking. Build the backend system for state-specific verification officials to access and verify documents securely.

2. *Data Collection:* -Use sample student data from different states. Collect documents like Aadhar card, previous academic records, and domicile certificates.

3. *User Groups:* -Students: Upload their documents for verification. State Verifiers: Assigned to verify and authenticate the student documents based on their state. Institutions: Access the verified data for admission and records.

4. *Testing:* Test the system with a small group of students and officials. Conduct user tests to identify issues like ease of use, document verification accuracy, and speed. The project will adopt a user-centered design methodology, focusing on the following steps:

1. User Needs Analysis: Surveys and focus groups will identify key requirements.
2. System Design: Development of a multi-layered architecture integrating state and institutional databases.
3. Prototyping: Iterative testing with user feedback to refine the platform.
4. Implementation: Deployment of a web-based portal with secure access controls and real-time updates.

3.3 System Architecture:
1. *User Layer (Frontend):* Students: Register, upload documents (ID proof, academic records,

domicile certificate), track verification status. State Verifiers: Log in, view and verify student documents, approve/reject verification. Institutions: Access verified student data for admission and record-keeping.

2. *Application Layer (Backend Logic):* -Authentication System: Secure logins for students, verifiers, and institutions with access control. Document Management: Upload, store, retrieve documents, and track verification status (pending, approved, rejected). Verification System: Routes requests to state verifiers based on the student's domicile. Notification System: Sends status updates and alerts verifiers about new documents. Dashboard/Reporting: Institutions access verified data, and reports are generated for admin use.

3. *Data Layer (Database):* - User Data: Stores information for all users (students, verifiers, institutions). Document Storage: Secure storage of documents (e.g., AWS S3 or Google Cloud Storage). Verification Status Database: Tracks verification status and timestamps.

4. *External Systems (Third-Party Integration):* -Aadhar Verification API: For identity verification using Aadhar. Academic Records API: For automatic academic certificate verification. Domicile Verification: Integrates with state databases for domicile verification.

4. Experimental Setup

The portal prototype will be tested with a sample of 100 students divided into experimental and control groups. The experimental group will use the ISSVP prototype, while the control group relies on traditional methods. Metrics such as task completion time, collaboration frequency, and user satisfaction will be analyzed.

Techniques to be used:

1. *Frontend Technologies:* HTML, CSS, JavaScript: For creating the user interfaces (Student, Verifier, Institution portals).
React.js or Angular: For building responsive, dynamic, and interactive UIs.
Bootstrap: For responsive design and quick prototyping.
2. *Backend Technologies:* Node.js or Python (Flask/Django): For building the server-side logic and API endpoints.

PHP or Java Spring: For handling the application logic, database interactions, and communication between frontend and backend.

RESTful API: For communication between frontend and backend, ensuring modularity and scalability.

3. *Database Technologies:*

MySQL/PostgreSQL: Relational databases for storing user data, verification status, and metadata.

Cloud Databases (AWS RDS, Google Cloud SQL): For scalable database management.

4. *Document Management & Storage:*

AWS S3 or Google Cloud Storage: For secure cloud-based storage of student documents (ID proof, certificates, etc.).

Encryption (AES-256): For ensuring secure document storage and transmission.

5. *Security Techniques:*

SSL/TLS Encryption: For secure communication between users and servers.

Two-Factor Authentication (2FA): To enhance login security, especially for verifiers and institutions.

Role-Based Access Control (RBAC): To ensure that users (students, verifiers, institutions) only have access to relevant data.

IV. CONCLUSION

The ISSVP has the potential to revolutionize student verification in India by providing a centralized, interoperable platform. Future research should explore advanced features like AI-driven analytics, broader institutional adoption, and integration with international academic systems The portal will improve efficiency and accessibility in scholarship verification. It will reduce administrative burdens and support students across state lines. Represents a significant advancement in scholarship administration

V. REFERENCES

[1] "Inter-State Student Verification System for Scholarship Eligibility: A Cross-Institutional Approach" Journal of Educational Technology and Society Kumar et al. (2022)

[2] "A Blockchain-Based Solution for Inter-State Student Verification in Scholarship Distribution" International Journal of Information Management- Singh et al. (2021)

[3] "Cross-State Student Verification Systems: A Review" Journal of Education Administration, Smith, John, and Johnson, Emily R.12(4), 2021

[4] "Automated Verification Systems for Scholarship Management" Journal of Financial Aid Brown, Alex, and White, Sarah, 9(2), 2019.