

## CERTIFICATE VALIDATION SYSTEM

### ABSTRACT

The Certificate Validation System is developed to ensure the authenticity and legitimacy of certificates issued by institutions, organizations, or training centers. In today's digital world, certificate fraud is a growing concern, causing difficulties in verifying whether a document is genuine or tampered with. This system provides a modern, secure, and efficient solution for certificate verification using unique certificate IDs and QR codes.

The system allows administrators to create and manage certificates through a dedicated dashboard. Each certificate is generated with a unique identifier and an embedded QR code. When scanned or entered into the verification portal, the system checks the database and instantly displays the validity status of the certificate. This eliminates manual verification errors and promotes trust and transparency.

With its user-friendly interface, streamlined workflow, and secure verification method, the Certificate Validation System serves as an essential tool for institutions, students, and employers who seek a reliable way to validate issued certifications.

### MODULE DESCRIPTION

#### ADMIN:

- Login
- Add certificate
- View all certificates
- Generate certificate ID
- Generate QR code
- Delete certificate
- Change password

#### USER (PUBLIC VERIFICATION):

- Visit verification page
- Scan QR code / enter certificate ID
- View certificate details
- Check validity status

### SYSTEM REQUIREMENTS

#### HARDWARE SPECIFICATION

- Processor : Intel i3 or above
- Hard Disk : 20 GB or above
- RAM : 4 GB or above
- Monitor : 15" VGA Color
- Keyboard : Standard Windows Keyboard

#### SOFTWARE SPECIFICATION

- Operating System : Windows 8/10 or higher
- Front End : React.js, Tailwind CSS
- Back End : Node.js, Express.js
- Database : MongoDB
- Tools/IDE : VS Code, Postman

