

# SENTHIL NATHAN S



senthilnathans1730@gmail.com



+91 6381200750



Watrap Tamil Nadu



senthil nathan



senthilnathan1730



My Portfolio

## PROFILE

As a final-year Cyber Forensics student at MGR University, I'm deeply interested in cybersecurity, ethical hacking, and Linux systems. I enjoy exploring how technology works under the hood and how to protect it. I've also created a personal website, SunduVault, where I share my cybersecurity projects, tools, and experiments. I believe that security is the foundation of trust in the digital world, and I'm excited to be part of that mission.

## PROFESSIONAL SKILLS

**Security:** Vulnerability Assessment, Penetration Testing, Web Application Security, Linux Administration

**Networking:** TCP/IP, OSI Layers, DHCP, DNS, Network security Protocols

**Programming Languages:** C, PHP, Python, JavaScript

**Operating System:** Linux, Windows, Android

**Security Tools:** IAM, VPN, DLP, Vulnerability Scanners

**Version Control & Collaboration:** Git, GitHub

## INTERNSHIP

### • Web Development

(Mar- 2022 Apr-2022)

Baboolsoft

### • Cybersecurity

(Jun- 2025 Jul-2025)

Elavat Lab

## PROJECTS

### VOTECHAIN – SECURE BLOCKCHAIN-BASED ELECTRONIC VOTING SYSTEM

[View Code](#)

JUL 2025 Present

**Technologies Used :** HTML, CSS, Solidity, Python, Python (Flask), MongoDB / SQLite, MetaMask

#### Description :

VoteChain is a decentralized and tamper-proof electronic voting system that leverages blockchain technology to ensure transparency, integrity, and security in the electoral process. The system allows registered users to cast votes through a secure interface, and every vote is stored as a transaction in a blockchain ledger. This guarantees immutability, voter anonymity, and verifiable results, making it suitable for college elections, organization polls, or small-scale government use.

#### Key features:

- Blockchain-based vote storage to prevent tampering and double voting
- Immutable ledger that records each vote transparently
- Voter authentication using unique ID or credentials
- Real-time vote count visibility without compromising voter identity
- Admin dashboard to add candidates and manage election rounds
- Anonymous voting to protect voter privacy
- Web interface for voters and election managers
- Fully responsive design for mobile and desktop access

#### Responsibilities :

- Designed and implemented a custom blockchain ledger for secure vote recording
- Developed voter verification and one-vote-per-user logic
- Built a web interface using HTML/CSS/Tailwind CSS for voters and admins
- Ensured vote encryption and transaction integrity
- Performed testing for vote accuracy, chain validity, and edge cases
- Documented project architecture, voting process flow, and deployment steps

## RFID BASE ATTENDANCE SYSTEM USING NODEMCU

 [View Code](#)

Feb 2024 May 2024

 **Technologies Used :** HTML, CSS, JavaScript, jQuery, PHP, MySQL, Arduino IDE

### **Description :**

The RFID-Based Smart Attendance System is an intelligent solution designed to automate and streamline attendance tracking in educational institutions and workplaces. The project leverages RFID technology integrated with a NodeMCU microcontroller to identify individuals via RFID tags. Attendance data is captured in real-time and securely transmitted to a web-based portal connected to a MySQL database for centralized monitoring.


### **Key features:**


Live attendance status, automated record updates, and minimal human intervention, ensuring accuracy and efficiency. The system includes a responsive HTML/CSS frontend, a PHP backend for data handling, and is deployed on a local server with options for cloud integration.

### **Responsibilities :**

- Designed and developed the complete attendance system using RFID technology and NodeMCU.
- Built a responsive web interface using HTML, CSS, and PHP to manage attendance records efficiently.
- Integrated the RFID reader with NodeMCU to capture and transmit attendance data wirelessly.
- Set up a MySQL database to store and retrieve user and attendance information reliably.
- Implemented real-time synchronization between the hardware device and web portal.
- Handled backend logic using PHP, ensuring seamless data flow between microcontroller and database.

### **Achievements :**

 Won First Prize at the Talent Expo Project Competition conducted by Ayya Nadar Janaki Ammal College, showcasing innovative application of IoT and automation in education.

 Selected to represent the college at the Anna University Regional Campus Project Expo, demonstrating technical excellence and real-world relevance of the RFID-Based Attendance System to a panel of academic and industry experts.

---

## SECUREFILE – SECURE FILE ENCRYPTION & DECRYPTION SYSTEM (WEB & CLI & GUI)

 [View Live](#)  [View Code](#)

May 2025 - Jun 2025

 **TechnologiesUsed :** Python, Flask, PyCryptodome (AES-256),HTML, CSS, JavaScript, Tailwind CSS

### **Description :**

SunduVault is a dual-interface (Web & CLI) application built using Python that provides robust AES-256 encryption and decryption for sensitive data files including documents (PDF, DOCX, TXT), images, and videos. The system ensures data confidentiality and security by using industry-grade encryption standards, suitable for both personal and professional use. The web version offers a user-friendly UI for non-technical users, while the CLI version provides advanced control for power users.

### **Key Features:**

- AES-256 encryption/decryption support for files and folders.
- Secure handling of multiple file types: documents, images, videos.
- Web interface using Flask for non-technical users.
- CLI interface for Linux/Ubuntu systems with command-line flexibility.
- Password-protected encryption with key-based access control.
- Mobile-responsive frontend using Tailwind CSS for easy access.

### **Responsibilities:**

- Designed and implemented AES-256 encryption and decryption logic using PyCryptodome for strong data protection.
  - Created a Linux-based CLI tool with flexible command-line arguments and detailed logging for power users.
  - Handled file type validations, error handling, and input sanitization to ensure stability and security.
  - Built a responsive UI using Tailwind CSS for smooth cross-device compatibility and modern design.
  - Integrated folder-level encryption support for batch encryption/decryption through both CLI and web interface.
-

**Technologies Used :** HTML, CSS, JavaScript, Tailwind CSS, Font Awesome, PHP, MySQL

## **Description :**

Sundu Cabs is a fully functional online cab booking platform designed to provide a seamless ride-booking experience for users. The system supports both Single Trip and Round Trip options with a user-friendly interface, booking confirmation, pricing calculation, and user account management. The platform is responsive and built to simulate a real-world cab service application, suitable for live demonstrations, academic showcases, or prototype use by small taxi agencies.

## **Key Features:**

- User Registration & Login system with session-based access control.
- Cab Booking Options for both Single Trip and Round Trip.
- Pickup and Drop Location input with travel date & time selection.
- Dynamic Price Calculation based on trip type and car selection.
- Booking Summary Page with complete trip details and amount.

## **Responsibilities:**

- Designed and built the entire user system including login, registration, and session control.
- Developed booking forms for both single and round trips with dynamic data capture.
- Integrated booking confirmation flow with proper data storage and error handling.
- Designed the MySQL database schema to store user and booking data securely.
- Created a mobile-responsive layout using Tailwind CSS and tested across devices.
- Conducted functional testing for all booking scenarios and user operations.
- Implemented the user dashboard to display personalized booking records.
- Added search functionality to dynamically filter bookings in the admin/user panel.

## EDUCATION

---

**Post Graduate (2024-2026)** Grade : 78%

**Cyber Forensic And Information Security**

DR. MGR Education And Research Institute, Chennai

**Under Graduate (2021-2024)** Grade : 66%

**Computer Application**

Ayya Nadar Janaki Annal, Sivakasi

**HSC (2019-2021)** Grade : 78%

Nadar Higher Secondary School, Watrap

## CERTIFICATE / ACHIEVEMENTS

---

**Ethical Hacking** - Nptel.

**Microsoft AZ-900** - Microsoft.

**Linux unhatched** -Cisco Network Academy.

**Linux Essentials** - Cisco Network Academy.

**Talent Expo** - Anjac.

---