



Siddharth Pulugujja

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Bachelor of Technology

Computer Science and Engineering

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GitHub Profile

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EDUCATION

•National Institute of Technology, Warangal

Bachelor of Technology, Computer Science and Engineering

•Resonance Junior College, Hyderabad

Telangana State Board of Intermediate Education

•Rotterdam International School, Hyderabad

Central Board of Secondary Education

PERSONAL PROJECTS

•Cyberpunk-Themed Website Clone

Developed a responsive single-page website inspired by the visual aesthetics of the Cyberpunk 2077 game.

- Tools & technologies used: HTML, CSS, JavaScript, GSAP (for animations)
- Designed and implemented futuristic UI/UX elements including neon-glow effects, animated scroll transitions, and dark-mode aesthetics. Improved frontend development and animation skills.

•2D Java Cannon Simulation Game

Simulating cannons shooting balls and detecting collisions with effects

- Tools & technologies used: Java, AWT/Swing, Custom Audio System
- Implemented shooting mechanics, real-time collision detection, and explosion effects upon impact. Integrated audio playback and visual feedback, improving understanding of object-oriented programming and graphics handling in Java.

•InClass – Smart Geofenced Attendance System

Developing a full-stack intelligent attendance platform integrating geofencing, AI-based identity verification, and secure authentication.

- Tools & technologies used: Node.js, Express.js, PostgreSQL, React.js (Vite), JWT, Twilio OTP, Google Maps Geolocation API, Socket.io, face-api.js (client), @vladmandic/face-api (server), TensorFlow.js Node backend, WebAuthn (FIDO2), AES-256-GCM encryption, Nodemailer, pgAdmin, Postman.
- Implementing advanced AI-driven face recognition using face-api.js (SSD MobileNet + 68-landmark + recognition model) on the client and TensorFlow.js + @vladmandic/face-api on the backend for secure face embedding verification using cosine similarity.
- Integrating WebAuthn-based fingerprint/device biometric authentication with secure credential creation, signature validation, counter-based replay protection, and multi-device support for faculty and students.
- Built backend REST APIs with complete role-based authorization, session-based attendance logic, time-restricted codes, duplicate-entry detection, tab-switch detection, device/IP anomaly monitoring, and mandatory biometric verification.
- Implemented geofencing using Google Maps API combined with Haversine distance validation to prevent proxy attendance and ensure physical presence on campus.
- Designed and optimized a scalable PostgreSQL schema covering colleges, departments, users, courses, sessions, biometric templates, fingerprint-assist workflow, expired-code reports, and session-wise fraud analytics.
- Added full real-time capabilities using Socket.io for attendance session activation, live student attendance updates, registration approvals, fingerprint-assist request flow, and administrative notifications.
- Built automated email/SMS systems (Nodemailer + Twilio) for OTPs, alerts, and suspicious-activity warnings.
- Designed a fingerprint-assist workflow enabling students without onboard fingerprint hardware to get faculty-assisted registration.
- Enabled multi-college scalability using composite database uniqueness on (college_id, roll_no).
- Deployed separate Student/Faculty portals, added hidden secure admin routes, and redesigned onboarding flows for multi-factor biometric security.
- Project is still under construction, expanding toward full biometric verification, AI anomaly detection, and deployment as a production-ready platform.

TECHNICAL SKILLS AND INTERESTS

Languages: C, C++, JAVA, JavaScript, HTML, CSS, R, Python (AI/ML), Basics of Assembly
Developer Tools: Docker, VS Code, IntelliJ IDEA, GIT, PgAdmin 4, Postman, OpenCV
Frameworks: React.js, Node.js, Express.js, Flutter, Hyperledger Fabric, Spring Boot
Cloud/Databases: MongoDB, MySQL, PostgreSQL, Google Cloud APIs (Geolocation, Geocoding)
Soft Skills: Teamwork, Storytelling, Leadership (NCC), Creative Thinking, Adaptability, Communication, Photography
Coursework: Data Structures and Algorithms, Computer Networks, Operating Systems, Database Management Systems, Object Oriented Programming, Web Development
Areas of Interest: Full Stack Development, Machine Learning, AI/Computer Vision, Authentication Systems, Geolocation Systems, Blockchain, Cybersecurity, Filmmaking, UI/UX Design

POSITIONS OF RESPONSIBILITY

•Lance Corporal, NCC(National Cadet Corps)	2023 - current
•Member, Film Club	2024 - current

ACHIEVEMENTS

•JEE MAINS Secured AIR 3115(CRL) in JEE MAINS	2023
•JEE MAINS Secured AIR 599(OBC-NCL) in JEE MAINS	2023
•JEE ADVANCED Secured AIR 4515(OBC-NCL) in JEE ADVANCED	2023