

Shagnik Paul

Kolkata, India | +91-9748447241 | shagnikpaul.772@gmail.com | [LinkedIn](#) | [GitHub](#) | [LeetCode](#)

PROFILE

Currently in the 3rd year of my Computer Science degree at VIT Vellore. I have a strong interest in developing web applications and exploring innovations in web technologies. I also enjoy solving data structure and algorithm problems, as well as puzzles using DSA concepts. I consider myself a dedicated, hard-working, and committed team member.

EDUCATION

Vellore Institute of Technology (VIT) <i>B.Tech in Computer Science and Engineering (IoT Specialization), CGPA: 9.36</i>	Vellore, India Expected Apr 2027
St. Joan's School (CISCE) <i>Class XII – 95.75% — Class X – 96.2%</i>	Kolkata, India Apr 2022

PROJECTS

Unity Help (Full Stack Web App – React + Firebase) Github	2025
– Individually developed a volunteer-help platform that connected 20+ test users, where normal users posted requests and volunteers signed up to assist.	
– Built the frontend with React , Chakra UI , and Tailwind , ensuring responsive design with less than 1 second average load time across devices.	
– Integrated Firebase Authentication with Google sign-in, enabling seamless and secure login for all users.	
– Configured Firebase Firestore to store and manage 100+ user posts, volunteer profiles, and task records with real-time sync which were generated using test data.	
– Implemented email notifications via Brevo's JavaScript SDK to:	
* Notify users when volunteers accepted their tasks (10+ notifications tested), sharing volunteer contact details.	
* Send automated thank-you messages to volunteers upon task completion, improving user engagement.	
Automated Toll Collection System (Full Stack Web App) Github	2024
– Collaborated in a 3-member team project to automate toll collection using an Arduino + camera setup, successfully detecting 50+ test vehicles and capturing license plate images for billing automation.	
– Built a backend with FastAPI and MongoDB to process 500+ license plate records, applying EasyOCR with 90% accuracy after filtering irrelevant text, and logging toll entries with time, location, and fee.	
– Developed a frontend in React with Chakra UI , achieving near real-time updates using TanStack Query.	
– Designed a dashboard to display recent vehicles, full toll history, and QR codes for details, enabling quick access to cumulative bills.	

TECHNICAL SKILLS

Core CS Concepts: Data Structures and Algorithms, Database Management Systems, Object-Oriented Programming
Programming Languages: Java, JavaScript, Python, C++, C
Frontend: React, Shadcn Components, Chakra UI, Next.js, HeroUI, Flowbite, HTML, CSS
Backend: Flask, Django, Express.js, FastAPI, Node.js, Supabase, Firebase, MongoDB

EVENTS PARTICIPATION

Yantra Central Hackathon Backend Developer & UI/UX Designer, Team of 5 Certificate Link	March 2025
– Collaborated in a 36-hour hackathon with a 5-member team to build a Flutter app for waste classification, enabling users to exchange recyclables at nearby centers for rewards.	
– Designed a modern and user-friendly UI/UX prototype in Figma , consisting of 8 connected screens for core app functionality.	
– Developed the backend with Flask and MongoDB , implementing 10 REST API endpoints (CRUD operations + custom queries) for data and image handling, integrated with an ML model for waste classification and secured with Supabase authentication.	

CERTIFICATIONS

Full Stack Web Developer Bootcamp (Udemy) by Colt Steele Certificate Link	2024 - 2025
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LANGUAGES

English (Fluent), Hindi (Fluent), Bengali (Native)