

Amul Kumar

+91-6367546428 | amul.kumar.min21@itbhu.ac.in | [Linkedin](#) | [Github](#) | [Portfolio](#)

EDUCATION

Indian Institute of Technology, Varanasi

Varanasi, India

B.Tech (Dual Degree) in Mining Engineering [CPI: 8.27/10 (upto 6 semesters)]

Dec. 2021 - Present

Dr. KKR Gowtham International School

Andhra Pradesh, India

CBSE, Class X (Grade: 94.8%)

2019

Bihar Board, Class XII (Grade: 87.2%)

2021

EXPERIENCE

Product Intern — Maiti labs, Remote

May. 2024-June, 2024

- Implemented **jira software** for task and bug tracking, optimizing team workflows and improving **issue resolution rates from 3-4 to 7-8 per sprint**.
- Established **Confluence** for software documentation, facilitating clear communication and alignment across teams. while also managing the **hiring of a design intern** to enhance team capabilities.
- Developed a five-stage Jira workflow **To Do, In Progress, Done, PR Merged, Production Testing**, enhancing task tracking and productivity.
- Analyzed team progress and competitor projects using Confluence to drive **product improvements and differentiation in the market**.

PROJECTS

DDOS Stimulation

- Developed an educational DDoS simulation tool using **HTTP flood techniques**, featuring a **client, proxy server, and target server** for attack replication.
- Built a client capable of sending up to **5,000 HTTP requests** to the target server, with a proxy server simulating attacks from different IP addresses by spoofing the X-Forwarded-For header at the application layer.
- Implemented **rate limiting** on the target server to mitigate HTTP flood attacks and demonstrated how application-layer **IP spoofing** can bypass basic detection mechanisms, highlighting its limitations compared to network-layer spoofing.

Festpass

- Developed a **QR code-based entry system** for college fest to ensure secure and **efficient access control**, tailored for **users, volunteers, and admins**.
- developed a **role-based system** allowing users to generate **single-use QR codes**, with admins managing permissions and volunteers authenticating entries.
- Implemented features including **user sign-in** with **college email**, **QR code generation**, **admin controls** for permissions and volunteer management, and **QR code scanning** by volunteers.
- Integrated **email notifications**, where generated QR codes are sent to the user's college email, and the **college email ID** is verified using a **one-time verification link** sent to the email.

Geolocator-helper

- Developed a React hook library for **geolocation data** access and **reverse geocoding**, enabling seamless conversion of coordinates into addresses using the **olakrutrim** service.
- integration with **external APIs**, allowing users to effortlessly retrieve address information with an API key or obtain **latitude** and **longitude** coordinates without one.
- Published the library on npm, achieving over **900 downloads**.

TECHNICAL SKILLS

Languages:C/C++, Python, Rust, JavaScript, TypeScript

Frontend:React, HTML5, CSS3, Redux Toolkit, TailWind Css, Bootstrap

Backend:Node, Express, MongoDB, REST APIs , EJS , JWT Authentication, Nodemailer, Cloudinary

Devops/Tools:Git, GitHub, Vercel, OnRender, Netlify, jira, confluence, Postman

Learning & Development:WebSockets, WebRTC, Multimedia Streaming (DASH, HLS)