

RAJ SINGH

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Projects

Flashcard SaaS App | *FastAPI, Python, JavaScript, PostgreSQL, SQLAlchemy*

- Shipped a full-stack **SaaS** tool that accelerates flashcard creation by **10x** using AI-based summarization.
- Engineered a **Manifest V3** browser extension using Service Workers and asynchronous API calls to handle **over 1,000 weekly requests** with optimized background performance.
- Monetized via PayPal and Ko-fi; ran a marketing campaign achieving **50k+** impressions and **16 recurring paid users**.

SmartScape: Urban Infrastructure Planning Assistant | *Flask, Vertex AI, GCP* | IBM / CSRBOX

- Ranked **Top 4 pan-India** at the IBM SkillsBuild Program; showcased at the IBM Annual Summit 2025.
- Engineered a full-stack **geospatial analytics** platform leveraging Google Gemini multimodal AI.
- Deployed an interactive frontend on **Render** using a **Git-based CI/CD** pipeline, and implemented robust security practices by domain-restricting Google Maps API keys.

Web Atlas | *Three.js, TopoJSON, WebGL, REST API*

- Built an interactive 3D globe with accurate country boundaries using TopoJSON and WebGL (Three.js).
- Added raycasting for real-time hover and selection, integrated live geographic statistics via **REST APIs**.

Experience

Summer Intern

June 2025 – August 2025

Software Technology Parks of India (An autonomous body under MeitY)

- Performed vulnerability assessments and port scans using **Nmap**; mapped services and analyzed exposure across **50+ websites**.
- Simulated **OSI model packet flow** and decapsulation to understand network-layer behavior and data flow.
- Analyzed live traffic using **Wireshark** and tcpdump to detect anomalies like ARP spoofing.
- Tested **30** web applications for **OWASP Top 10** vulnerabilities using Burp Suite; mapped issues to CVE/CWE IDs.

Front-End Developer

June 2024 – July 2024

Lowfied.com (A startup marketplace for music producers)

- Created and maintained **20 responsive UI components** using React.js and Tailwind CSS.
- Implemented landing page and dashboard designs with **pixel-perfect accuracy** from Figma.
- Collaborated with a 3-member design team and founders to iterate on UI/UX improvements.

Skills

- Languages:** C, C++, Python, Java, JavaScript, Lua, Bash, SQL
- Frameworks:** FastAPI, Flask, React.JS, Tailwind CSS, Matplotlib, Hibernate, NumPy, Pandas
- Cybersecurity:** Nmap, Wireshark, Burp Suite, TCP/IP, OWASP Top 10
- Tools:** Linux, Docker, SQLAlchemy, PostgreSQL, Git, GitHub, Unity, RAG, AI APIs
- Others:** DSA, OOP, RESTful APIs, System Design (Basics), Authentication and Authorization
- Roles:** Software Engineer Intern, Full-Stack Developer

Education

Vivekananda Institute of Professional Studies

Pitampura, Delhi

B.Tech in Computer Science and Engineering

June 2026

Relevant Coursework: Computer Networks, Operating Systems, Database Management Systems

Leadership

Head of Social Media, Srijan (Eco Club)

2023 - 2024

- Led a 20-member team to manage sustainability campaigns and social media outreach.