# Samanvi Rajput

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## Professional Summary

Results-driven Computer Science undergrad with hands-on experience in building production-grade backend systems, low-latency infrastructure, and scalable distributed tools. Led development of a real-time rate limiter at PayGlocal using Java, Spring Boot, AWS Athena, and DynamoDB, optimizing concurrency with custom thread pools. Currently building an API discovery and governance system to track 500+ enterprise endpoints across languages and platforms. Passionate about system design, API security, and solving real-world problems through clean, efficient code.

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## Experience

Part Time Intern – PayGlocal (July 2025 – Present)

Project: Rate Limiter Server

- Engineered a low-latency rate limiter server from scratch using Spring Boot, processing over 30,000+ API calls daily with near real-time verdict generation.
- Architected a custom token-bucket + sliding window logic system to detect traffic spikes across 500+ merchants, enhancing fraud detection accuracy by 40%.
- Implemented concurrent Athena query execution reducing query latency by ~50% and supporting horizontal scaling.
- Designed a DynamoDB-based logging pipeline to persist usage patterns, enabling month-long analysis of transactional API behavior.
- Collaborated with the fraud intelligence team to integrate the rate limiter into the broader risk scoring framework, reducing false positives.

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## Projects

API Discovery System for Enterprise Audit (Ongoing)
(Node.js, TypeScript, AWS Lambda, Docker)
Spearheading a lightweight, language-agnostic API discovery system using Git metadata, traffic logs, and code scanning to classify 500+ legacy APIs.
Deployed via AWS Lambda and Docker, allowing scalable audits across teams without needing Swagger/OpenAPI contracts.
Designed a tagging system to assign ownership, flag deprecated endpoints, and surface undocumented APIs in near real-time.

SOS AI – Mental Health Companion
Built an AI-powered mental health chat app using React + TypeScript and Express backend, serving 100+ users in early alpha
Integrated Gemini 1.5 Flash with custom sentiment analysis and chain-of-thought prompting to generate emotionally intelligent responses.
Unified three separate micro frontends into a seamless app with shared routing and global .env config for simplified deployment.
Secured user auth using Clerk headless components and Supabase, reducing onboarding time by ~60%

Task Manager Web App (Personal Project)
Designed a full-stack task management platform with smart deadline reminders and category-based sorting, improving personal task completion rate by ~35%.
Built with React, Express, MongoDB, and JWT-based auth; optimized backend to support 100+ concurrent sessions.

Ootsav – Serverless Onboarding Platform
Architected a secure onboarding flow for event registration using Twilio OTP, reducing verification errors by 75%.
Deployed a fully serverless Express.js backend with AWS Lambda, ensuring <200ms cold start latency.

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## Education

Vellore Institute of Technology
B.Tech in Computer Science Engineering | 2023 – 2027

Greenwood High International School
2012 – 2023

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## Skills

Languages: Java, Python, C, C++

Frameworks/Tools: Spring MVC, Spring Boot, MySQL, AWS, React, Node.js

Databases: MySQL, PostgreSQL, MongoDB, DynamoDB

Other: REST APIs, Concurrency, Serverless (AWS Lambda), Git, Docker

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## Certifications

Spring Boot 3, Spring 6 & Hibernate – Udemy

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## Leadership & Extracurriculars

Senior Core Member – IEEE-CS Technical Chapter, VIT

Spearheaded marketing strategies and community engagement campaigns as part of the publicity and marketing department.
Drove outreach initiatives and ensure participation in technical events and workshops.
Collaborated with cross-functional teams to promote a growth-driven chapter culture.