

Vasu Maredugonda

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Backend Developer — API Design — Database Optimization — Scalable Systems

Summary

Backend-focused software engineering student with hands-on experience building high-performance RESTful APIs, designing relational and NoSQL database schemas, and deploying scalable systems on AWS. Proven ability to translate complex business logic into clean, production-ready Python code using FastAPI and Flask. Passionate about eliminating bottlenecks through automation, optimized data workflows, and robust backend infrastructure.

Technical Skills

Languages: Python, Java, C++, JavaScript

Frameworks: FastAPI, Flask

Cloud & DevOps: AWS (Lambda, EC2, SNS, EventBridge, CloudFront), VPC, Load Balancing, Auto Scaling, Serverless Architecture

AI/ML: LangChain, LangGraph, RAG (Retrieval-Augmented Generation), Agentic AI

Web: HTML, CSS, JavaScript

Databases: MySQL, MongoDB, DynamoDB, Amazon S3, SQL

Tools: Git, Postman, Docker

Concepts: Data Structures & Algorithms, OOP, RESTful APIs, Microservices, Event-Driven Architecture, Schema Design, Query Optimization

Projects

QuickCred — Serverless P2P Student Lending Platform — AWS, Python, FastAPI, DynamoDB

Sept – Dec 2025

- Architected **5 serverless microservices** on AWS Lambda, designing clean API contracts and enforcing strict business logic across loan lifecycle stages.
- Built **15+ high-performance REST API endpoints** handling user management, loan transactions, repayments, credit scoring, and async notifications.
- Modeled relational data across **5 DynamoDB tables**; enforced data integrity through duplicate prevention, self-funding guards, and status validation rules.
- Automated **cross-service workflows** via Amazon EventBridge — repayment events trigger credit score updates and notification pipelines with zero manual intervention.
- Integrated **Amazon SNS** for async notification delivery; applied schema design principles to optimize data retrieval across all services.

Scalable Opinion Analytics System — Python, Flask, MySQL, Chart.js

2026

- Designed relational schema with **constraint logic** enforcing one-vote-per-user integrity and role-based access control (RBAC) with bcrypt authentication.
- Engineered entropy-based opinion polarization metric and **real-time dashboards** using Chart.js for live data visualization.

Visual Genius — Python, Flask, Google Cloud Vision API

Sept – Dec 2024

- Built image analysis backend processing **100+ inputs** with object detection, OCR, and landmark recognition; managed full API request-response lifecycle.

Experience

Technical Team Member — Swayam Entrepreneurship Cell

2025

- Built backend components and integrated APIs for early-stage prototypes; designed modular, scalable system architecture.

Campus Ambassador — TooClarity

2025

- Led outreach initiatives to increase student engagement and platform visibility.

Education

Vasavi College of Engineering — B.E. Computer Science

2025 – 2028

Teegala Krishna Reddy Engineering College — Diploma in CS

CGPA: 9.2 · 2022 – 2025

Certifications

- Java Foundation** — Infosys Springboard, 2025
- MongoDB Core Concepts & Architecture** — MongoDB University, 2026
- Machine Learning Foundation** — Infosys Springboard, 2026
- Introduction to Cybersecurity** — Cisco Networking Academy, 2026
- Introduction to Cloud Computing on AWS** — Udemy, 2026