

Vatsal Sharma

Software Engineer

github.com/VATSAL-0109 | candidates.intervues.club/u/vatsal-sharma

SUMMARY

Software Engineer with experience in developing enterprise REST APIs, building serverless data pipelines, and implementing machine learning models. Proven track record in optimizing backend performance, database querying, and rate-limiting system design.

EXPERIENCE

Software Development Trainee

Yash Technologies

Mar 2026 – Present

- Engineered and maintained core REST APIs for an enterprise-level SaaS platform using Python, FastAPI, and MS SQL Server.
- Designed a 4-tier API rate-limiting architecture, enforcing limits across 50+ ERP API endpoints.
- Refactored complex database queries and SQL logic, eliminating redundant database hits and preventing duplicate object creation.
- Optimized test suite performance, reducing execution time from 18 minutes to 5–6 minutes.

Software Development Trainee

YASH Technologies

Mar 2026 – Present

- Engineered and maintained core REST APIs for an enterprise-level SaaS platform using Python, FastAPI, and MS SQL Server.
- Designed a 4-tier API rate-limiting architecture, enforcing limits across 50+ ERP API endpoints.
- Refactored complex database queries and SQL logic, eliminating redundant database hits and preventing duplicate object creation.
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Data Analytics Intern

Datavagyanik Business Intelligence

May 2025 – Jul 2025

- Built an end-to-end data pipeline to integrate 202 country-level healthcare records across 17 indicators with market sizing data.
- Executed exploratory data analysis, feature engineering, and data visualization on structured datasets.
- Developed a Healthcare Market Prediction model using Ridge and ElasticNet regularization with 5-fold cross-validation.

Data Analytics Intern

Datavagyanik Business Intelligence Solutions

May 2025 – Jul 2025

- Performed data cleaning, preprocessing, and exploratory data analysis to extract actionable business insights.
- Constructed interactive dashboards and reports using Power BI and Excel.
- Applied Python for data manipulation, visualization, and machine learning workflows.

Head of Public Relations

E-Cell, SGSITS Indore

Sep 2024 – May 2025

- Led public relations operations and external outreach initiatives for the student entrepreneurship cell.

Artist

Club Kshitij, SGSITS Indore

Nov 2023 – May 2025

- Contributed creative and artistic work for college club initiatives and events.

Environmental Head

NSS SGSITS

Nov 2023 – Jan 2025

- Directed environmental awareness campaigns and community service projects.

Head of Public Relations

E-Cell, SGSITS Indore

Jun 2023 – Sep 2024

- Led public relations operations and external outreach initiatives for the student entrepreneurship cell.

Environmental Head

NSS SGSITS

Dec 2022 – Nov 2023

- Directed environmental awareness campaigns and community service projects.

EDUCATION

Shri G.S. Institute of Technology and Science, Indore · B.Tech · 2022 – 2026
Shri G S Institute of Technology & Science · Bachelor of Technology - BTech · 2022 – 2026
Indian Institute of Technology, Madras · Bachelor of Science - BS
Guru Nanak Public School · 2021
The Lovedale Sr. Sec. School Satna · 2019

SKILLS

Languages and Frameworks: JavaScript, Python, SQL, TypeScript, FastAPI, LangChain

Databases: MS SQL Server

Tools: API Design, AWS: EC2, AWS: Glue, AWS: IAM, AWS: Lambda, AWS: QuickSight, AWS: Redshift, AWS: S3, BM25, ETL pipeline, Excel, Git/GitHub, JIRA, Jupyter Notebook, LLaMA 3.1, Matplotlib, NumPy, OCR, OOP, Pandas, Power BI, pytest, REST APIs, Retrieval-Augmented Generation (RAG), Scikit-learn, Semantic Search, System Design, Vector Search, VS Code

PROJECTS

MediBot.AI - Medical Chatbot with RAG + Document Analysis

Engineered a RAG based chatbot using LLaMA 3.1 (via Groq API), building a custom vector store of 4800+ text chunks from a 750+ page medical encyclopedia. Built a hybrid retrieval system. Engineered a RAG-based chatbot using LLaMA 3.1 via Groq API. Constructed a custom vector store containing 4800+ text chunks from a 750+ page medical encyclopedia. Implemented a hybrid retrieval framework leveraging BM25, Tesseract, and PyPDF2 for OCR and semantic search.

LLaMA 3.1, Groq API, BM25, Tesseract, PyPDF2, RAG, OCR
GitHub

Cloud Data Lake Architecture using AWS (Serverless ETL Pipeline)

Deployed a serverless AWS data lake (S3, Glue, Redshift Serverless) with automated ETL pipelines to transform raw CSV logs to Parquet format. Executed SQL workflows on Redshift. Deployed a serverless AWS data lake architecture using S3, Glue, and Redshift Serverless. Automated ETL pipelines to transform raw CSV logs into optimized Parquet format. Executed SQL workflows on Redshift and created analytical visualizations using AWS QuickSight.

AWS S3, AWS Glue, AWS Redshift Serverless, AWS QuickSight, AWS IAM, SQL

AWARDS

Oracle Cloud Infrastructure 2025 Certified AI Foundations Associate, Advanced Search Engine Optimization