

SUSHANT MUTNALE

+918080438631

sbmutnale512@gmail.com

LinkedIn

GitHub

Leetcode

Codeforces

Codechef

Summary

- B.Tech Computer Science 2026 student with a strong foundation in AI, backend systems, and system design.
- Skilled in data preprocessing, model training, evaluation, and deployment.
- Proficient in Generative AI and predictive modeling, leveraging these skills to automate and solve real-world problems.
- Strong problem-solving abilities demonstrated by successfully solving 500+ DSA problems.
- Passionate about solving real-world challenges with AI and continuously improving expertise.

Technical Skills

- Programming Languages: Python, Java, C++, SQL
- Web & Backend: RESTful APIs, Docker, Redis, MySQL, Postman
- AI & ML: Scikit-learn, TensorFlow, PyTorch, RAG, MCP
- Tools & Platforms: Git, GitHub Actions (CI/CD), Linux, AWS (EC2, S3)
- Other: QLoRA Fine-Tuning (LLMs), Unit Testing (PyTest), DSA

Experience

IdeaFloats Technologies - Data Science Intern

June 2025 – Oct 2025

- Built an attention-based **CNN + YOLO** pipeline for lesion detection, achieving **85%+** accuracy across **80+** disease classes.
- Designed an automated training–inference system using **Learning without Forgetting** (LwF) for seamless class updates.
- Developed an AI chatbot with advanced **RAG** and anomaly detection, enabling smart session handling and context continuity.

Pantech.AI - Intern

July 2024 – Sep 2024

- Built a **FastAPI** backend for a multi-user TODO app with **JWT** authentication, including **CRUD** tasks, user **isolation**, secure sessions, and **Dockerized** services for consistent development and testing.
- Designed session **persistence** and security logic using MySQL and added **encryption/decryption** utilities for sensitive fields.
- Developed **PyTest** API tests for authentication, sessions, and edge cases. aligning with **frontend** on API contracts.

Projects

AlgoTutor AI | *Python, FastAPI, LLMs, FAISS, Web Assembly, Docker, EC2, Redis*

- Built a multi-agent educational engine using LLMs with FAISS-based retrieval, improving answer coherence by **~20%**.
- Reduced average latency by **65.7% (3.5s → 1.2s)** and scaled throughput by **~192%** via Redis caching and optimized pipelines.
- Deployed **Dockerized** services on AWS EC2, enabling real-time feedback for 100+ concurrent users.

AI-Driven Smart Attendance Platform | *OpenCV, TensorFlow, ArcthisFace, FastAPI, Docker, Pandas*

- Built a real-time attendance system achieving **98%** recognition accuracy at **30** FPS.
- Optimized inference pipelines, improving throughput to **~200** FPS equivalent.
- Scaled to **400+** users, supporting incremental updates and analytics reporting.

Certification

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| • AI Agents – Hugging Face by <i>Hugging Face Learn</i> . | • Machine Learning Operations by <i>Google Cloud</i> . |
| • AI Powered Software and System Design by <i>Coursera</i> | • Building RAG Agents with LLMs by <i>Nvidia</i> |
| • Introduction to CUDA by <i>Nvidia</i> . | • .C Programming by <i>NPTEAL</i> |

Education

SGMCOE, Shivaji University

2022-2026

B. Tech Computer Science & Engineering

8.20 CGPA

Achievements/Extracurricular

- **Two-time hackathon winner** with participation in **5+** technical hackathons.
- Elected and served as the **Head of Training and Placement** Officer for one year.