

Riya Singh

B.Tech Student -- Machine Learning & GenAI Explorer
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SUMMARY

Computer Science undergraduate focused on Machine Learning, NLP, and Retrieval-based AI systems. Experienced in building hybrid RAG pipelines, semantic search engines, and deploying ML applications with FastAPI and React.

PROFESSIONAL EXPERIENCE

Labmentix

AI/ML Intern

Remote

Jun 2025 – Sep 2025

- Preprocessed and modeled 50k+ records, improving performance by 12%.
- Built and evaluated ML models; documented experiments for reproducibility.

Next Tech Lab - McCarthy Lab

SRM University, AP

Associate

Apr 2025 – Jan 2026

- Contributed to ML, NLP, and GenAI research discussions and project ideation.

TECHNICAL SKILLS

Programming: Python, Java, JavaScript

Machine Learning: Supervised & Unsupervised Learning, Model Evaluation, Feature Engineering, scikit-learn

Deep Learning: CNNs, Neural Networks, TensorFlow, Keras

NLP & GenAI: Embeddings, Semantic Search, Retrieval-Augmented Retrieval (RAG-style), Text Preprocessing, Prompt Engineering

Vector Databases: FAISS

Backend Development: FastAPI, Flask

Frontend: React (Vite), HTML, CSS

Databases: SQL, Database Management Systems (DBMS), Advanced DBMS

Computer Science Fundamentals: Operating Systems, Computer Networks

Tools: Git, GitHub

PROJECTS

Medical Report Analyzer - Hybrid RAG System

Python, FAISS, SentenceTransformers

- Built hybrid retrieval system combining FAISS-based semantic search with regex-driven parameter extraction.
- Implemented PDF parsing, chunking, embedding generation, and structured medical value comparison.
- Classified 15+ lab parameters (High/Low/Normal) and generated organized category-wise output.

AI Resume Matcher - Full Stack NLP Application

React, FastAPI, NLP

- Developed full-stack application matching resumes to job descriptions using embedding similarity.
- Built FastAPI backend for PDF extraction and semantic scoring using SentenceTransformers.
- Designed React interface for resume upload, skill gap analysis, and match scoring.

Brain Tumor Classification

CNN, TensorFlow

- Trained CNN on 3,000+ MRI scans achieving 92% accuracy.
- Applied data augmentation and regularization for performance improvement.
- Used Grad-CAM for interpretability and model explanation.

EDUCATION

SRM University, AP

Expected Aug 2027

B.Tech in Computer Science and Engineering

CGPA: 9.23/10

CBSE (Class XII) – 93.4%

2023

CBSE (Class X) – 99%

2021