

# 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

Associate

SRM University, AP  
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