

RIYA SINGH

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Professional Summary

Computer Science undergraduate specializing in Machine Learning, Natural Language Processing, Generative AI, and Agentic AI systems, with hands-on experience building intelligent, adaptive applications. Experienced in developing Retrieval-Augmented Generation (RAG) pipelines, semantic search systems, and LLM-powered solutions with dynamic reasoning capabilities using modern frameworks such as FastAPI, React, Streamlit, and AWS.

Strong foundation in Data Structures & Algorithms, probability, and statistical modeling, with practical experience in designing end-to-end ML workflows including data preprocessing, model optimization, evaluation, and deployment. Passionate about solving real-world problems through AI-driven automation, scalable systems, and production-ready intelligent applications.

Education

B.Tech – Computer Science Engineering (Artificial Intelligence & Machine Learning)

SRM University AP, India

2023 – Present [CGPA: 9.23 / 10.0]

Relevant Coursework: Data Structures & Algorithms, Machine Learning, Deep Learning, Natural Language Processing, Artificial Intelligence, Probability & Statistics, Database Management Systems (DBMS), Operating Systems, Computer Networks, Parallel & Distributed Computing.

Technical Skills

Programming Languages: Python, Java, JavaScript, SQL

Machine Learning: Scikit-learn, Feature Engineering, Data Preprocessing, Model Evaluation, Classification, Regression, Cross-Validation, Hyperparameter Tuning

Deep Learning & Computer Vision: TensorFlow, Keras, Neural Networks, Convolutional Neural Networks (CNNs), OpenCV, DeepFace, Real-time Face Recognition Systems, Model Optimization

Natural Language Processing & Generative AI: RAG Systems, Embeddings, Semantic Search, Prompt Engineering, SentenceTransformers, LLM Integration, Agentic AI Systems, Text Classification, Information Retrieval

Frameworks & Backend Development: FastAPI, Flask, Streamlit, REST APIs, LangChain

Frontend Development: React, HTML, CSS, JavaScript

Data Analytics & Visualization: Power BI, Data Visualization, KPI Dashboards

Databases & Vector Stores: SQLite, FAISS

Cloud Platforms: AWS (EC2, S3, IAM)

Developer Tools: Git, GitHub, Jupyter Notebook, VS Code

Projects

AI Study Planner Agent – Agentic AI Learning System

Python, Streamlit, LangChain, Groq API

- Built an agentic AI system generating personalized study plans based on user level, syllabus, and time constraints.
- Implemented adaptive planning strategies (Beginner, Intermediate, Revision) using LLM-based reasoning.
- Developed integrated notes generator for structured explanations and practice guidance.
- Designed interactive Streamlit interface for real-time AI responses.

AI Face Recognition Attendance System – Computer Vision Application

Python, OpenCV, DeepFace, Streamlit, SQLite

- Built a real-time face recognition system using deep learning embeddings for automated attendance tracking.
- Implemented multi-person detection and identity matching with OpenCV and DeepFace.
- Designed duplicate-safe attendance logic ensuring one entry per person per day.
- Developed live dashboard with webcam feed and real-time attendance updates.

Medical Report Analyzer – Hybrid RAG System

Python, NLP, FAISS, Streamlit

- Designed a hybrid RAG pipeline for medical report analysis using semantic retrieval and structured reasoning.
- Implemented PDF parsing, text chunking, embedding generation, and similarity-based retrieval.
- Generated concise and structured medical insights through an interactive web interface.

AI Resume Matcher – NLP-Based Recruitment System

Python, NLP, SentenceTransformers

- Built embedding-based semantic similarity engine for matching resumes with job descriptions.
- Implemented preprocessing, skill extraction, and ranking for candidate evaluation.

Sales Performance Dashboard – Data Analytics Project

Power BI

- Developed interactive dashboard for KPI tracking, sales trends, and business insights.
- Designed visualizations for decision-making using real-time and historical data.

Healthcare Analytics Dashboard – Data Visualization System

Python, Streamlit

- Built data visualization dashboard for healthcare insights using Python and Streamlit.
- Presented key metrics and trends through interactive charts and analysis.

Sentiment Insight – NLP-Based Sentiment Analysis

Python, Machine Learning

- Developed text classification model for sentiment analysis using NLP techniques.
- Applied preprocessing, vectorization, and supervised learning models.

Internship Experience

Artificial Intelligence and Machine Learning Intern

Labmentix

2025

- Developed ML models using Python, focusing on data preprocessing, feature engineering, and model evaluation.
- Worked with Pandas, NumPy, and Scikit-learn for structured data analysis.
- Applied supervised learning techniques and evaluated performance using standard metrics.

Certifications

Oracle Certified: Java SE 17 Developer

2026

- Achieved 84% score, demonstrating proficiency in Java programming, OOP concepts, and core application development.

Machine Learning Training Certification – Labmentix

- Gained hands-on experience in data preprocessing, supervised learning models, and performance evaluation.

Machine Learning Training – Internshala

- Completed structured training covering data preprocessing, model building, and evaluation techniques.

Data Science & AI Masters – Udeemy

2026

- Covered Python, EDA, Statistics, SQL, Machine Learning, NLP, Deep Learning, and Generative AI concepts.

Technical Blogs

From Unbreakable to Breakable: Blockchain's Quantum Crisis – Medium

- Discussed the impact of quantum computing on blockchain cryptographic security.

Smarter Chains: Exploring the Role of Machine Learning in Decentralized Ecosystems – Medium

- Explored how ML can enhance blockchain systems through predictive analytics and anomaly detection.

Hackathons & Achievements

2nd Place – Code for Connection Hackathon

- Secured 2nd place in a 12-hour hackathon organized by Coding Club SRMAP.
- Designed and prototyped a technology solution focused on strengthening human connection.
- Demonstrated teamwork and rapid problem solving.

Achievements & Leadership

Co-Host – Research Opportunities in Computer Science (ROCS) 2026

- Co-hosted an academic event organized by SRM University AP ACM Student Chapter.

- Coordinated interactions with researchers from IIT Hyderabad, IIT Tirupati, IIIT Hyderabad, and IMSc Chennai.
- Strengthened leadership, communication, and event management skills.

Areas of Interest

Machine Learning, Generative AI, Natural Language Processing, Retrieval-Augmented Generation (RAG) Systems, Deep Learning, Computer Vision, AI System Design, Distributed Systems.

Languages

English – Professional Proficiency

Hindi – Native Proficiency

Soft Skills

Problem Solving

Analytical Thinking

Technical Research

Team Collaboration

Communication