

RACHIT KUMAR SINGH

AI/ML Engineer | Machine Learning Engineer | Python Developer

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PROFESSIONAL SUMMARY

CS undergraduate at KIIT University (CGPA: **8.31/10**). Built and deployed AI applications using **PyTorch, TensorFlow, spaCy, FastAPI, and React**, spanning deep learning, NLP, computer vision, and LLM integration. Independently deployed a full-stack AI system on **AWS EC2** with Nginx and PostgreSQL. Delivered a **CNN classifier (92% accuracy, 16,000+ images)** and a **multi-PDF RAG pipeline**. Currently **ASE Summer Intern (Python)** at Accenture with hands-on Python automation and Agile delivery. **250+ LeetCode problems solved**. Targeting AI/ML, Data Science, and Python internship roles.

TECHNICAL SKILLS

Programming: Python, Java, SQL, JavaScript

Machine Learning & Deep Learning: PyTorch, TensorFlow, Keras, Scikit-learn, CNN, Deep Learning, Machine Learning, Data Augmentation, Hyperparameter Tuning

NLP & Generative AI: spaCy, NLTK, NLP, Named Entity Recognition, Text Classification, TF-IDF, Cosine Similarity, RAG, LLMs, Prompt Engineering

Backend & APIs: FastAPI, REST APIs, JWT Authentication

Frontend & Databases: React, PostgreSQL, MySQL, Vector Databases

Cloud & DevOps: AWS EC2, Linux, Nginx, Git, GitHub, Vercel

WORK EXPERIENCE

Accenture Solutions Private Limited | ASE Summer Intern – Python

May 2026 – Present | Bengaluru, India

- Developed Python automation scripts to replace 3 manual reporting workflows, cutting analyst preparation time by eliminating repetitive data extraction and formatting tasks across cross-functional business teams.
- Wrote unit tests, debugged integration failures, and refactored 2 Python data-processing pipelines within an Agile sprint cycle; improved code reliability and reduced defect rate in weekly delivery reviews.

TECHNICAL PROJECTS

AI Resume Screening Assistant | PyTorch, spaCy, TF-IDF, Scikit-learn, FastAPI, React, PostgreSQL, AWS EC2, Linux, Nginx

GitHub | May 2026

- Trained a **PyTorch text classifier** to categorise resumes across 25 job domains; applied **spaCy NLP** for named entity recognition to extract structured candidate attributes – skills, education, and work experience – from raw resume text with high parsing accuracy.
- Implemented **TF-IDF vectorisation and cosine similarity** scoring to rank candidate-JD match relevance; built a **FastAPI** backend with **PostgreSQL** storage, a **React** frontend, and deployed on **AWS EC2** with **Nginx** reverse proxy under Linux server administration.

Fresh ScanX – CNN Image Classifier | PyTorch, TensorFlow, Keras, CNN, Computer Vision, FastAPI, REST API, Vercel

GitHub | Live | Sep 2025

- Designed and trained a custom **CNN** achieving **92% classification accuracy** on a **16,000-image dataset** across 20 fresh/rotten produce classes; applied **data augmentation, cross-validation, and hyperparameter tuning** to lower validation loss and improve model generalisation under varied lighting and noise conditions.
- Exposed the trained model via a **FastAPI REST API** for real-time image inference; integrated the API with a live **React** web interface, replacing manual produce inspection with automated computer vision classification.

SupportGPT – RAG Document Q&A | Python, FastAPI, RAG, FAISS, LLMs, Prompt Engineering, Vercel

GitHub | Live | Jan 2026

- Built a **Retrieval-Augmented Generation (RAG) pipeline** that ingests multiple PDFs up to **100 MB**, chunks and indexes document text into a **FAISS vector store**, and retrieves semantically relevant passages via **cosine similarity** to ground LLM responses – eliminating hallucination on document-specific queries.
- Designed **structured prompt templates** and a **FastAPI** query interface; deployed the full system on Vercel, reducing document search time from manual PDF review to sub-second LLM-powered retrieval.

EDUCATION

KIIT University | B.Tech – Computer Science & Engineering

2023 – 2027 | Bhubaneswar, India

- CGPA: **8.31/10** | No Active Backlogs | Relevant Coursework: Data Structures & Algorithms, Statistics, DBMS, Operating Systems, OOP

Vision International School | CISCE Board – Class XII: 84.4% (2023) | Class X: 89.8% (2021)

Uttarpara Kotrung, West Bengal

CERTIFICATIONS

IBM – Data Science Professional Certificate, Coursera

June 2026

IBM – Machine Learning Professional Certificate, Coursera

June 2026

ACHIEVEMENTS & ACTIVITIES

- Competitive Programming:** Solved **250+ DSA problems** on LeetCode across arrays, trees, graphs, and dynamic programming – consistent algorithmic problem-solving practice. *Ongoing*
- SOF International Mathematics Olympiad (IMO): Gold Medal** (2014, 2015, 2016) and **Silver Medal** (2017, 2018) – top-decile quantitative reasoning across five consecutive national cycles.
- IEEE CTSoc & CIS Technical Volunteer:** Managed author coordination and publication workflows for the 23rd OCIT International Conference, KIIT University. *Dec 2025*