AKSHAT RAJ SAXENA

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Linkedin | CodeForces | Portfolio | MathStackExchange | GitHub

EDUCATION

Indraprastha Institute of Information Technology Delhi   New Delhi, India
Computer Science & Engineering BTech   November 2022 - May 2026

Spring Meadows Public School   New Delhi, India
Science with Maths and Computer Science, Class 12th   2020 - 2021

EXPERIENCE

Pervasive Sensing & Intelligent Assistive Systems (PerSisSt) Lab | ML Intern   IIIT Delhi, New Delhi | May 2025 - Present

Development of an Emotion-Aware Plant-Computer Interaction System for Adaptive Music Feedback. This project is assigned under the supervision of Prof. Pragma Kar.

Complex Systems Laboratory | Research Assistant   IIIT Delhi, New Delhi | January 2025 - May 2025

Development of a Retrieval-Augmented Generation (RAG) Based AI Chatbot for Recipe Recommendations Using the RecipeDB Dataset. This project is assigned under the supervision of Prof. Ganesh Baglar.

SKILLS

Programming Languages:	C/C++, Java, Python, JavaScript
Libraries/Frameworks:	SentenceTransformers, Scikit Learn, Weights & Biases, TensorFlow, PyTorch, NLTK, XGBoost, Seaborn, Matplotlib, PySpark, Plotly, NumPy, Pandas
Tools / Platforms:	Kaggle, Colab, Hugging Face, Apache Spark, Apache Maven, Figma, JAVAFX, VS Code, GitHub
Databases:	SQL, MongoDB, PostgreSQL, Neo4j

PROJECTS

GastroGenie: AI-Powered Recipe Recommendation | In Dev   *Python, JS, HTML, CSS, Tailwind*
Created a RAG based AI Chatbot recommender named, GastroGenie. It is an intelligent recipe recommendation system that leverages Natural Language Processing (NLP) and semantic search to provide users with relevant recipes based on specific criteria such as protein content, preparation time, and regional cuisine. The system processes a dataset of large amount of recipes and employs a two-stage retrieval architecture combining vector search with cross-encoder re-ranking for improved accuracy.

Dish Nutrient Simplifier | Link   *React, HTML, CSS, Tailwind*
A full stack web Application which provides a collection of ingredient from diverse cuisines worldwide including their enhanced profile (like gluten-free, raw, cooked). It includes detailed ingredient lists and nutritional profiles for each ingredient, allowing users to explore dishes that match their dietary preferences.

Implementing Locality Sensitive Hashing | Link   *Python, Jupyter-Notebook*
This project involves implementing Locality Sensitive Hashing (LSH) in Python to identify the similarities between documents within a large dataset. This involves using the TF-IDF parameter for feature representation. The results have been plotted and are compared against the Ground Truth to evaluate accuracy.

Stick Hero Game | Link   *JAVA, JAVAFX, JUnit, OOPS*
Developed a Fully Functional Stick Hero Game using the Java Module and Java FX including OOP's concepts. Developed core game mechanics, including pause menu, cherry/point collection, animations, and character and scene change options.

Certifications

- Excelled in Daily Quiz of Engineering: February Series - **Unstop**
- Competitive Programming Summer Camp 2024 - **IICPC**
- AWS APAC - Solutions Architecture Job Simulation - **Forage**
- Docker and Kubernetes Program - **PW (Physics Wallah)**
- Excelled Adobe GenSolve Adobe GenSolve & HackOn with Amazon Coding Round - **Unstop**
- Fundamentals of Generative AI - **Microsoft**
- Excelled IICPC Competitive Programming Summer Camp 2024. - **Algozenith**
- Computer Networks - **Microsoft**

Honors & Awards

- First Dan Black Belt in Karate, practicing since 2008
- Two Bronze Medals in National Level Karate Championship 2018 and 2019
- Hobbies Dancing and Guitar