

# RANJEET KULKARNI

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## POSITION OF RESPONSIBILITY

GOOGLE DEVELOPER GROUP, IIITA Oct 2024 – Present

- Orchestrated immersive **AI/ML workshops**, empowering **50+ students** with hands-on experience in advanced technologies.
- Directed high-impact **Google Solutions Challenge** projects, delivering innovative AI solutions for real-world challenges.
- Co-Engineered **Adermis** – an **AI-driven skin disease severity predictor**:
  - Developed robust ML models for **PCOS risk assessment** and **pregnancy health prediction**, significantly enhancing diagnostic accuracy.
  - Integrated **Google Maps API** to provide real-time doctor/pharmacy recommendations.
  - Architected a **scalable AI pipeline** leveraging **Gemini API, RAG, FAISS, and Computer Vision**, with a responsive **Next.js/Tailwind CSS** frontend.

## PROJECTS

**N.E.S.T : AI-Driven Clinical Trials Recommender System**

- 🔗 [GitHub Repo](#)
- Engineered a scalable AI pipeline to semantically group and retrieve clinical trial data (**450k records, 495 MB of Textual Bio-Medical Data**) by merging multi-source textual data and extracting structured relationships via **Gemma 2**; optimized node deduplication using **Stella 1.5B embeddings** and **FAISS** (0.8 threshold, avg cosine similarity 0.857) while architecting a dynamic **Neo4j knowledge graph**.
- Implemented a graph-based recommendation engine with Neo4j GDS (**Jaccard similarity**) to deliver top-10 trial recommendations—ensuring cost efficiency, clinical relevance, and explainability.

**CiboGenie: AI-Powered Food Analysis** 🔗 [GitHub Repo](#)

- Engineered an AI-driven platform that extracts and synthesizes multi-source data (PDFs, Wikipedia, Google) to analyze food ingredients, define safe consumption guidelines, and recommend healthier substitutes.
- Integrated geolocation-based store recommendations with interactive mapping via Google Maps API and Folium, while enhancing semantic search using FAISS and Transformers.

**Tech Stack:** TensorFlow, Streamlit, Groq API, Google Maps API, FAISS, Sentence Transformers

**InkSpire: Real-Time Sketch Colorization** 🔗 [GitHub Repo](#)

- Built an interactive web application using GANs for real-time sketch-to-color transformation, delivering a seamless user experience.
- Trained a custom GAN model on an anime dataset to generate high-quality colored outputs with reduced latency.

**Tech Stack:** GANs, Flask, HTML5, CSS3, JavaScript, Anime Sketch Colorization Pair dataset

## CERTIFICATIONS

**Artificial Intelligence and Machine Learning** – EICT IIT Kanpur [\[LINK\]](#)

**Project Completion Certificate** – EICT IIT Kanpur [Link Here](#)

## EDUCATION

B.Tech. in Information Technology

**IIIT Allahabad**

📅 2023 - Present 📍 Prayagraj, UP

CGPA (till 4th Sem): 8.66

**Coursework:** Data Structures and Algorithms, Object-Oriented Programming, Operating Systems, Computer Organization and Architecture, Database Management Systems (DBMS), Computer Networks, Probability and Statistics, Linear Algebra, Discrete Mathematics.

## TECHNICAL SKILLS

### AI/ML & Data Science

- Core Concepts:** Supervised/Unsupervised Learning, NLP, Neural Networks, Computer Vision, GANs, Generative AI, LLMs, Knowledge Graphs
- Frameworks & Tools:** TensorFlow, PyTorch, Flask, RASA, FAISS, Neo4j, Twilio WhatsApp API

### Software Development

- Web Development:** React.js, Next.js, Node.js, Express.js, Flask, REST APIs
- Programming:** Java, C/C++, Data Structures & Algorithms, Competitive Programming

### Programming Languages & Tools

- Languages:** Python, JavaScript (ES6+), SQL, HTML5/CSS3
- Tools:** Git, GitHub, Vite.js, Postman

## ACHIEVEMENTS

### Academic Excellence:

Secured top ranks in highly competitive exams—JEE Main 2023 (**AIR 3660**), JEE Advanced 2023 (**AIR 6461**), and **NTSE Scholarship Rank 126**.

### Competitive Programming:

**Codeforces Pupil:** Achieved a max rank of **#2860** in **Div 1+2**. [\[Profile\]](#)  
**CodeChef 3-Star:** Secured impressive global ranks: **#544, #259, #459**. [\[Profile\]](#)  
**LeetCode:** Attained a rating of **1771**, with a **Biweekly Contest 429** rank **2609**. [\[Profile\]](#)

### Hackathon Success:

**Semi-Finalists Ranked in Top 42 National Teams** (32k+ participants) in the **Novartis NEST Hackathon** [\[LINK\]](#)

### Open Source Contribution:

Contributed to **Opencode24**—the college’s flagship open-source event. [\[LINK\]](#)