

Pranav Kuchibhotla

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SKILLS

- **Languages & Tools:** Python, SQL, Java, MongoDB, MySQL, Streamlit
- **ML & Data Science:** Supervised & Unsupervised Learning (Logistic Regression, Random Forest, Classification), Transformers (FLAN-T5, Mistral), RAG, LoRA, Time Series, Federated Learning, Geospatial Modeling
- **Libraries & Dev Tools:** Pandas, NumPy, Matplotlib, Seaborn, FAISS, Hugging Face, LangChain
- **Tools and workflow:** Git, Agile Development, API Integration, Model Evaluation, Technical Documentation, Debugging
- **Languages:** English (Fluent), Telugu (Fluent), Hindi (Conversational)

EDUCATION

Illinois Institute of Technology, Chicago, IL
Bachelor of Science in Artificial Intelligence

Expected Graduation: December 2025

- Minor in Data Science
- GPA of 3.84 | *Dean's List* in every semester

EXPERIENCE

Teaching Assistant, Illinois Institute of Technology, Chicago, IL (August 2023 – Present)

- Mentor 90+ students across CS 115/116 (Java, OOP) and CS 100 fundamentals; lead weekly labs & office hours.
- Provided 1-on-1 debugging help and graded coding projects, boosting average course pass rate by 8%.
- Communicated complex logic with clarity; received high student feedback for responsiveness and teaching clarity.

Machine Learning Researcher, Illinois Institute of Technology, Chicago, IL (February 2024 – May 2024)

- Contributed to ML research on early-frame detection by evaluating model outputs, preparing datasets, and logging experiments.
- Gained hands-on experience with reproducibility and benchmarking in a research workflow.

Software Developer, Koru Green, Remote (March 2024 – May 2024)

- Built a Python-based music data visualization tool to help independent artists interpret streaming trends.
- Delivered visual insights using Matplotlib & Seaborn under tight agile sprints.

PROJECTS

82 Below: Chicago Lead Contamination Risk Analysis ([Demo](#)):

- Processed 400k+ service line records and 10 years of water tests using Python and geospatial mapping.
- Built animated choropleths and a ZIP-level risk estimator to reveal seasonal hotspots and support equitable replacements.

JobExtractX: Structured Job Info Extraction ([Github](#)):

- Used FLAN-T5 and Mistral (LoRA, 8-bit) to convert 11k job descriptions into 100% valid JSON (F1: 0.92).
- Cut manual labeling by 80% via DeepSeek API; stored and queried data using MongoDB.

MedicQuery: Medical RAG Chatbot ([Demo](#)):

- Built a chatbot with LangChain, FAISS, and Mistral 7B for sub-second, citation-backed medical answers.
- Indexed 10+ textbooks and deployed a responsive Streamlit UI for secure Q&A.

Sports Win Probability Predictor ([Demo](#)):

- Developed a machine learning model using Python and Logistic Regression to predict the win probabilities of IPL teams during matches based on live game data.
- Deployed a Streamlit app using dynamic Pandas updates and match features like overs, wickets, and venue to visualize real-time game predictions.

INNOVATION & OUTREACH

- **Innovation Day Presenter (2025):** Showcased *82 Below* to 300+ attendees, including P33 Chicago, IBM, JPMorgan Chase, and city officials. The live, real-time choropleth was applauded as an accessible, human-centered tool for public-health decision-makers.