

KRISHNA PRIYA

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SKILLS SUMMARY

- **Languages:** Python, C++, C, MATLAB, HTML/CSS, JavaScript, PHP
- **Frameworks:** Pytorch, Tensorflow, React.js, Django, FastAPI, Firebase, MySQL, PostgreSQL, Neo4j, LangChain
- **Tools:** Git, Docker, Postman, Jira, AWS, Azure, REST APIs, Linux
- **Skills:** Algorithm Design, Back-end, Database Management, ML, NLP, CV, GenAI, Knowledge Graphs

EXPERIENCE

Data to Insight Center, Indiana University - Applied ML Researcher

Aug 2024 -Present

Indiana University, USA

- **Developed LLM agents** using **LangGraph** for multi-agent interaction in a RAG framework, converting user queries to Cypher, executing in a knowledge graph, and returning human-readable responses.
- **Working** on an NSF funded project connecting **Edge to the cloud** using **Apache Kafka** for event streaming, **Neo4j** for knowledge graphs and optimizing ML model placement to enhance QoE in **Edge cloud AI workloads**.

Indiana University School of Optometry - Research Machine Learning Engineer

Mar 2024 -July 2024

Indiana University, USA

- **Developed** a 3-D CNN model for automatic cone photoreceptor segmentation in AO-OCT images, enhancing diagnostic accuracy for retinal diseases.
- **Designed** a multi-stage pipeline with L-CNN, V-CNN, and C-CNN using signed distance maps, improving accuracy and addressing vessel shadowing.

Cogoport - Machine Learning Engineer

Aug 2022-Aug 2023

Mumbai, India

- **Automated a backend system** to monitor and analyze freight data, **boosting efficiency by 70%**. Implemented an **ETL pipeline** processing over 1M data points, **increasing throughput by 60%**.
- **Developed** an object detection model with TensorFlow and Keras, **enhancing document processing efficiency by 60%** through RPN, RoI Pooling, and data augmentation.
- **Led** a team of 5 to design an NLP-based email processing system, **improving workflow efficiency significantly**. Created APIs to support operations.

LTIMindtree - Software Engineer

Jun 2018 - Dec 2019

Bangalore, India

- **Developed** a real-time sensor data extraction and analysis system for 500+ automobiles using Python and Azure IoT Hub, **optimizing Azure Cloud** for data storage and processing which **enhanced business efficiency by 50%** and reduced **operational costs**.
- **Created RESTful APIs with Flask** for secure and efficient data access. **Integrated APIs** with client applications and third-party systems, **enhancing the functionality** of the monitoring system.

PROJECTS

- **Doctor-Patient ChatBot using LLM Fine-tuning ([link](#)):** Developed a healthcare chatbot with **fine-tuned Mistral-7B** on the HealthCareMagic-100k dataset for real-time consultations via **Gradio**. Optimized GPU use with **QLoRA** and **PEFT**, and evaluated **scalability with BLEU, ROUGE, and METEOR metrics**. (May 2024).
- **MediApp: Patient & Health Insurance Management Web Application ([link](#)):** Developed a **full-stack React and Django application** for managing medical records, appointments, and insurance claims with **secure multi-user access** for patients, doctors, and providers. (March 2024).
- **Text-Image Generator([link](#)):** Developed a mini diffusion model from scratch by implementing **UNET** architecture and **Variational Auto Encoder using PyTorch** which generates images based on a given text prompt. (Aug 2024)

EDUCATION

Indiana University, Bloomington

Master of Science, Intelligent Systems Engineering - AI/ML, Data Structures (CGPA 4.0)

Indiana, USA

Dec 2025

Indian Institute of Technology (IIT), Kanpur (Ranked 4th in India)

Master of Science, Electrical Engineering - Image Processing, AI/ML (CGPA 3.7)

Kanpur, India

Jul 2022