

KRISHNA PRIYA

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SKILLS SUMMARY

- **Languages:** Python, C++, C, MATLAB, HTML, JSON, PHP, CSS
- **Frameworks:** MongoDB, React.js, Django, FastAPI, Pytorch, Tensorflow, Firebase, MySQL, PostgreSQL
- **Tools:** Git, Docker, Postman, Jira, AWS, Azure, REST APIs, Linux
- **Skills:** Algorithm Design, Agile, Back-end, Image Processing, Machine Learning, NLP, CV, CI/CD

EXPERIENCE

Indiana University School of Optometry - Research Assistant Mar 2024 - Present
Bloomington, 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 over 500 automobiles using Python and Azure IoT Hub, **enhancing business optimizations by 50%**.
- **Optimized** the **Azure Cloud** platform for data storage and processing, **reducing operational costs** and improving performance.
- **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).
- **Fringe Analysis Using Deep Learning Method**: Implemented a CNN V-net model to improve fringe analysis, **benchmarking against a mathematical model**, and evaluated noise-corrupted fringe patterns. (Nov 2021).

EDUCATION

Indiana University, Bloomington Master of Science, Intelligent Systems - AI/ML, Data Structures (CGPA 4.0)	Indiana, USA Dec 2025
Indian Institute of Technology (IIT), Kanpur (Ranked 4th in India) Master of Science, Photonics, Electrical Engineering - Image Processing, AI/ML (CGPA 3.7)	Kanpur, India Jul 2022

LEADERSHIP & AWARDS

- Served as **Secretary, of the Athletics Club**, IIT Kanpur.
- Achieved **99 percentile** among **300,000** students in **All India GATE** examination 2020.
- Delivered over **50** impactful lectures on **Maths, Python & Data Structures** as a tutor on prepoly.com.