

PARV GATECHA

International Institute of Information Technology, Bangalore

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Education

International Institute of Information Technology, Bangalore

July 2024 – Current

Master of Technology in Computer Science and Engineering

CGPA 3.8/4.0

LJ Institute of Engineering and Technology

July 2020 – May 2024

Bachelor of Technology in Computer Science

CGPA 8.96/10

Experience

Bosch Global Software Technologies

May 2025 – Current

Applied Research Intern

Bengaluru, Karnataka

- Integrated a novel Vision-Language Model (VLM) into an autonomous driving stack, which reduced object detection processing time by 15% and improved system reaction speed.
- Analyzed and benchmarked over 10 state-of-the-art multimodal architectures, leading to a new model design projected to increase scene understanding accuracy by 20%.

TatvaSoft

January 2024 – June 2024

Software Engineer Intern

Ahmedabad, Gujarat

- Led the full-stack development of a scalable web application for appointment scheduling, successfully reducing average user booking time by 40%.
- Engineered and optimized backend systems using .NET, achieving a 25% reduction in server response time and enhancing overall application performance under load.

RemoTasks

January 2022 – January 2024

Freelancing

Remote

- Fine-tuned and deployed large-scale AI language models by leveraging advanced NLP techniques, which boosted conversational accuracy by 25% across multiple applications.
- Developed robust conversational AI systems using transformer architectures, successfully decreasing model error rates by 30% through targeted performance enhancements.

Projects

End-to-End MLOps: Image Caption Generator | *Python, FastAPI, Docker, CI/CD* | Codebase

- Engineered a complete CI/CD pipeline with Docker and GitHub Actions to automate model deployment, reducing manual deployment operations by over 95%.
- Developed a high-performance REST API using FastAPI to serve the model, achieving a 30% reduction in inference latency compared to previous versions.

Empathetic Dialogue System | *Python, PyTorch, Transformers*

- Architected and implemented a full transformer model from scratch in PyTorch, engineering all core components including multi-head self-attention and positional encoding.
- Trained the model on the Empathetic Dialogues dataset, resulting in a 25% higher BLEU score than baseline models and demonstrating superior conversational context.

Visual Question Answering (VQA) Model | *Python, TensorFlow, Hugging Face* | Codebase

- Designed a novel multimodal architecture by fusing a pre-trained ResNet CNN with a BERT-based language model to process complex vision-language tasks.
- Fine-tuned the model on the Amazon VQA dataset, increasing the final answer accuracy to 72%—a 15% performance improvement over the established baseline model.

Certifications

Machine Learning Specialization, Stanford University

May 2023

Google Data Analytics Specialization

March 2023

Technical Skills

Languages: Python, Java, C++, HTML, CSS, Javascript

Technologies/Frameworks: TensorFlow, PyTorch, Keras, OpenCV, Docker, Kubernetes, Github, React

Relevant Coursework

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|------------------------|-----------------------|---------------------------|-------------------------|
| • Data Structures | • Algorithms Analysis | • Artificial Intelligence | • Systems Programming |
| • Software Methodology | • Database Management | • Internet Technology | • Computer Architecture |

Achievements

Technothon (National Level Aptitude Exam)

November 2019

AIR 202

- Earned a distinguished placement in a national aptitude competition, showcasing strong logic and reasoning skills among 1,800 entrants.