

PRATHAM SARAF

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EDUCATION

Indian Institute of Information Technology

BTech Computer Science

Bhopal

December 2021 - Present

Relevant Coursework

- Object Oriented Programming
- Discrete Structures
- Advanced Engineering Maths
- Object Oriented Programming

RESEARCH EXPERIENCE

Indian Institute of Technology, Madras

Research Intern under Prof (Dr.) Rupesh Nasre

July 2023- Present

- Implemented a Graph Convolutional Network model in StarPlat, a domain specific language for graph algorithms, by writing functions for forward and backward passes. Discussed representing GNN algorithms in StarPlat DSL constructs. Gained hands-on experience with graph neural networks and generating optimized parallel code for multi-core CPU and GPU systems.
- Researched academic papers on utilizing StarPlat for efficient parallelization of graph neural networks on high performance computing systems. Analyzed expressibility of StarPlat language constructs for graph neural network processing.

Indian Institute of Information Technology, Bhopal

Research Intern under Prof (Dr.) Bhupendra Singh Kirar

November 2022- August 2023

- Developed and implemented Neural Networks for the research paper, which involved utilizing convolutional neural networks and transfer learning techniques.
- Analyzed the performance of the classifier using various evaluation metrics, including accuracy and specificity, and presented the findings in the research paper.

WORK EXPERIENCE

Acciolbis

Machine Learning Intern [LOR](#)

September 2022 - November 2022

- Improved document retrieval time to under 5 seconds through semantic searching and scoring, and optimized memory storage.
- Employed GCP to infer models and evaluated various open source text to image models and their variants.

LancerNinja

May 2023 - August 2023

- Led development of end-to-end AI solutions as Machine Learning Intern, leveraging OpenAI, LangChain and other state-of-the-art libraries. Rapidly prototyped and deployed models using FastAPI, AWS, GitHub.
- Partnered with cross-functional teams to architect customized NLP solutions for financial services and healthcare clients. Continuously expanded skillset by learning emerging technologies like vector databases.

PROJECTS

MultiModalGNN-SentimentAnalysis

April 2023 - Present

- Developed a **MultiModalGNN-SentimentAnalysis** model using variety of models **Graph Attention Mechanism**, BERT, and VGG16 , **Graph Neural Network** to perform sentiment analysis on a multimodal dataset.
- Created a graph structure using the extracted features and achieved an accuracy of 60% The model utilized an **ensemble of neural networks** to leverage both image and text information for accurate sentiment classification.

Self driving car simulator

August 2022

Github link for project [Kaggle Notebook](#)

- Gathered **145 thousand photos** which consisted of **3 perspectives** using automobile simulation. It included the braking speed, throttle position, and degree of steering wheel rotation
 - Trained model based on **Dave 2 system** which comprised of 5 convolutional layers and 3 fully linked layers; Data augmentation was done as well
- Skills Used: Python, CNN, Data collection, Pytorch*

POSITION OF RESPONSIBILITY

GNU/Linux Users Club

ML-OPS lead

IIIT Bhopal

August 2022 - Present

Google Developer Student Clubs(GDSC)

Assitant AI-ML lead

IIIT Bhopal

August 2022 - Present

Kratigence

Core Team Member

IIIT Bhopal

August 2022 - Present

SKILLS

Programming Languages:	Python, C++ ,C, R,
Platforms:	GitHub (with Github Actions), GitLab, Git
Database Management Systems:	MySQL , PostgreSQL, Mongo-DB
Web Development:	HTML , CSS (Bootstrap and Tailwind) , JavaScript ,Babel JS
Libraries / Frameworks:	Flask , Django, FastAPI, Pytorch, Tensorflow
Soft Skills:	Leadership, Communication Skills, Organised
Languges:	German , English

ACHIEVEMENTS

Runner Up <i>certificate</i> ↗ Won second prize in Intra IIIT development contest conducted by GDSC IIIT Bhopal for creating a password manager. <i>Skills Used: Python, MySQL, Encryption Methods (MD5Sum)</i>	HACK WITH GDSC IIITB: HACKATHON Google Developer Student Club Aug 2022
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CERTIFICATES

CS50’s Introduction to Programming with Python (Course Link ↗)	March 2022 - May 2022
Machine Learning Specialization by Deeplearning.ai (Course Link ↗)	April 2022 - July 2022
Deep Learning Specialization by Deeplearning.ai Course Link ↗	April 2022 - Present