Antareep Dey

antareep2018@gmail.com linkedin.com/antareepdey github.com/AntareepDey

Education

Vellore Institute of Technology, Bhopal 2022-2026
Bachelor of Technology in Computer Science *CGPA: 8.9 (Upto 5th Semester)*

- **Relevant Coursework:**
  Data Structures & Algorithms,Calculus & Laplace Transforms,Differential & Difference Equations, Applied Linear Algebra,Probability & Statistics,Discrete Mathematics & Graph Theory,Machine Learning

Experience

Research Intern October 2024 - January 2025
Indian Institute Of Technology, Kharagpur *On-Site*

- Designed a computer vision pipeline integrating BLIP-2 vision-language model and Stable Diffusion to synthesize a 5x augmented Tiny-ImageNet dataset (650,000 images).
- Optimized the dataset generation process using multi-threading, and data parallelism on a multi-GPU cluster, reducing time by 71%
- Analyzed CNN architectures (ResNet-18/50) to quantify performance metrics across synthetic-to-real data ratios, demonstrating the efficacy of synthetic data in mitigating class imbalance

Student Instructor April 2023 - June 2023
Code In Place, Stanford University *Remote*

- Led a group of 10-15 students from around the world through a 7-week course covering Python , console programming, and graphics programming
- Prepared and delivered 50-minute lessons on a weekly basis using provided lesson plans based on Stanford's CS106A course and answering student questions

Projects

SymptoCare | *HTML,WebSockets,Python,Flask*

- Implemented API for chatbot applications, optimizing performance and reducing response time by 30%.
- Created a large dataset consisting of 50,000 patient-doctor conversations to support fine tuning of Large Language Models

Surveillance Footage Optimization *Tensorflow.js, React, Tailwind CSS*

- Developed a system that optimizes storage by reducing unnecessary recording by 40%
- Accelerated footage review time by over 50% .
- Implemented MobileNetV2 deep learning model for image detection, and reduced latency by 10% through local processing while enhancing data privacy and security.

Technical Skills

Languages : C, C++, Python, SQL, LaTeX
Technologies and Libraries : Flask, Bash, Matplotlib, Pandas, Seaborn, Numpy ,PyTorch, Tensorflow

Certifications

- Advanced Learning Algorithms - Coursera
- Probability and Statistics for ML and Data Science - DeepLearning.AI