

Saprativa Sarkar

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PROFILE

Dedicated and highly motivated individual with a strong foundation in probability, statistics and machine learning. Seeking a software engineering position with a focus on deep learning, machine learning, data science, and computer vision roles. Possess excellent problem-solving, leadership, and teamwork skills, with a proven ability to develop innovative solutions and contribute to impactful projects.

EDUCATION

Birla Institute of Technology : Integrated Msc in Mathematics and Computing

Relevant Coursework: Probability and Statistics, Calculus, Linear Algebra, Database Management, Operating System, Computer Network, Data Structures, Design and Analysis of Algorithm, Object Oriented Programming, Data Mining and Warehousing

SKILLS

Programming Languages: Python, C++, Java, SQL

Frameworks & Tools: Pytorch, YOLO, Scikit-learn, Tableau

Technologies: Deep Learning, Low Level Design, Machine Learning, Object Oriented Programming, Computer Vision, NLP

Other Skills: Problem-solving, Analytical Thinking

MINOR PROJECT

Banking System Management Using SQL and Python

Description: Developed a comprehensive banking system management application.

Technologies: SQL, Python.

Features: Implemented account management, transaction processing, and user authentication.

Low-Level Design Implementation on Movie Ticket Booking and Airline Booking System

Description: Designed and implemented low-level architecture for movie ticket and airline booking systems.

Technologies: Object-Oriented Design Principles, UML.

Features: Developed modules for seat selection, payment processing, and booking confirmation.

LLM Implementation using Transformer Architecture

Description: Built a language model from scratch using transformer architecture.

Technologies: Python, TensorFlow, PyTorch.

Features: Implemented key components such as attention mechanisms and positional encoding.

Mammogram Classification

Description: Used a Kaggle dataset to classify mammogram images.

Technologies: Machine Learning, Deep Learning, Python, TensorFlow, Keras.

Features: Applied and compared several machine learning and deep learning models to determine the best-performing model.

MAJOR PROJECTS

Deep Learning Signboard Translator

Dataset Creation: Developed a custom dataset by writing Hindi alphabets to train the model.

Classification: Implemented a classification technique to identify the presence of text on the signboard.

Object Detection: Utilized YOLO (You Only Look Once) to detect and locate the text on the signboard.

Natural Language Processing: Applied NLP techniques to translate the detected text into the desired language.

Tools & Technologies: Python, TensorFlow, Keras, YOLO, NLP libraries.

ACHIEVEMENTS AND CERTIFICATIONS

Deep Learning Certification from One Fourth Lab

Data Science Certification from GeeksforGeeks (GFG)

Statistics Case Studies: Completed 25+ case studies in statistics

Professional Contribution: Contributed to Wells Fargo to enhance their financial services by implementing code in Java & OOP

Coding Contests: Participated in 10+ coding contests

Low-Level Design Contests: Participated in 5+ contests on low-level design from GeeksforGeeks (GFG)

CO-CURRICULAR ACTIVITY

Table Tennis Achievements:

Represented West Bengal in national table tennis (2018) for cadet boys. Ranked 7th in West Bengal for cadet boys in the 2017-18 season.

College table tennis captain, organized table tennis tournaments. Represented college table tennis team in sports fests at IIT Roorkee and IIT Kanpur, reaching the semifinals.

Event Participation and Leadership:

Anchoring experience at various college events. Publicity and social media team lead for the college annual fest BITOTSAV '24.