H Aditya Kumar

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EDUCATION

Indian Institute of Technology Bhubaneswar

B. Tech. Dual Degree in Mechanical System Design - CGPA: 8.17

Bhubaneswar, Odisha 2021 – Present

Modern Vidya Niketan, Faridabad

Senior School Certificate Examination, CBSE - CGPA 9.6

Faridabad, Haryana

2018 - 2020

EXPERIENCE

Research Consultant Intern

Oct 2023 – Oct 2024

Worldquant LLC

- Developed production-level trading strategies using Brain's simulation-based platform for financial simulations.
- Applied advanced quantitative techniques and data analysis, submitting 30+ strategies for out-of-sample testing.

Projects

Edge11 | GitHub | Link

Oct 2024

- Created a Dream11 prediction platform using an XGBoost model with 95% accuracy, trained on 20+ years of cricket data while addressing future date handling and retired player scenarios.
- Built a user-friendly web app with Next.js and Flask, integrating an AI-powered chatbot for personalized player selection insights.
- Delivered actionable insights through interactive visualizations of model performance and predictions.

Chess Engines | GitHub | Link

May 2024

- Designed a chess platform with three play modes: Random AI, Stockfish engine, and a reinforcement learning model trained on 60,000 games.
- Developed a responsive Next.js frontend, Flask APIs, and deployed on Azure and Vercel for scalable, high-performance delivery.

R-Auction | GitHub | Link

Dec 2023

- Built a reverse auction platform enabling real-time bidding, secure user authentication, and seamless functionality using the MERN stack.
- Deployed on Vercel for fast, real-time updates and optimized MongoDB integration for efficient data handling.

AI-Powered Pupil Dilation Tracking for Disease Monitoring

July 2024 - Present

- Developed a real-time AI framework using U-Net and CNNs to track pupil dilation for disease monitoring, leveraging TensorFlow for precise predictions under the supervision of Dr. Satish K Panda.
- Enhanced segmentation accuracy by processing images in the frequency domain and implemented automated data labeling to streamline training.

TECHNICAL SKILLS

Programing Languages: C/C++, Python, JavaScript/Typescript, HTML/CSS, MATLAB

Technologies/Frameworks: React, Node.js, Flask, Tailwind CSS, MongoDB, Postgres, Tensorflow, OpenCV

Dev Tools: Git, Github, Postman, Docker, AWS

CERTIFICATIONS AND ACHIEVEMENTS

C++ Advanced Algorithms - Udemy | Certificate

Deep Learning - DeepLearning.AI, Stanford University | Certificate

Participated in Inter IIT Tech Meet 13.0 - IIT Bombay

1st Place in Data Detectives Challenge - Wissenaire(TechFest), IIT Bhubaneswar

Leadership and Responsibility

Core Member - Tensor Club (ML Society)

Core Member - Data Science Club

Core Member - Software Development Club

Core Head - Alma Fiesta (Cultural Fest)

Core Member - Cinewave (Cinematics Society)

Core Member - Produit (Product Development Club)