H Aditya Kumar

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LinkedIn | GitHub | CodeForces | Leetcode

EDUCATION

Indian Institute of Technology Bhubaneswar Bhubaneswar, Odisha
B. Tech & M. Tech in Mechanical Engineering - CGPA: 8.12 *2021 – Present*

Modern Vidya Niketan, Faridabad Faridabad, Haryana
Senior School Certificate Examination, CBSE - CGPA 9.6 *2018 - 2020*

EXPERIENCE

Software Developer Intern May 2025 – July 2025
Centre for Development of Advanced Computing, Trivandrum

- Redesigned critical components of an emergency response system by identifying user pain points and deploying key enhancements, including a speech-to-text module and structured data input flows.
- Engineered an interactive crime analytics dashboard leveraging spatial analysis techniques (Getis-Ord, Mann-Kendall) and H3 hexagonal tiling for high-resolution geographic insights.
- Implemented K-means clustering to generate actionable patrol zone recommendations and optimize police vehicle routing.
- Integrated LLM-based summarization to convert complex chart data into clear, contextual insights for faster decision-making.

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.

AI-Powered Pupil Dilation Tracking for Disease Monitoring July 2024 - May 2025

- 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

Progrmming 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 Head** - Alma Fiesta (Cultural Fest)
Core Member - Data Science Club **Core Member** - Cinewave (Cinematics Society)
Core Member - Software Development Club **Core Member** - Produit (Product Development Club)