TANYA TWINKLE

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EDUCATION

Vellore Institute of Technology (VIT), Chennai
Bachelor of Technology in Computer Science and Engineering | 8.81

Notre Dame Academy, Patna
12th CBSE | 82.8%

Open Minds - A Birla School, Patna
10th CBSE | 93.6%

TECHNICAL SKILLS

- **Programming Languages**: C, C++, Python, Java
- **Web Technologies**: React.js, Node.js, Express.js, Next.js, HTML, CSS, JavaScript
- **Databases**: MongoDB, MySQL, PostgreSQL
- **Tools & Platforms**: AWS, Unity, Git, Vercel, Spring Boot

CERTIFICATIONS

- **AWS Cloud Foundations**
- **MERN Full-stack Development**
- **Realtime Images through Voice using Generative AI Models**
- **IIT Bombay - Python, Java, PHP, Advanced C++, and C Certifications**

PROJECTS

InsightNav (AI/ML and Computer Vision) | *Jan 2024 – May 2024*
- **Engineered** a desktop navigation system utilizing computer vision and machine learning, achieving 98.76% gesture recognition accuracy with OpenCV and TensorFlow.
- **Empowered** 100+ users with disabilities by **transforming** workflows through touch-free interactions, driving accessibility and usability.

Fraud Detection System (Machine Learning) | *Jan 2024 – May 2024*
- **Engineered** a machine learning model for fraud detection on 6M+ records, increasing detection efficiency by 30.78% through advanced data preprocessing and optimized feature selection using Pandas and Scikit-learn.
- **Improved** model performance by applying advanced data preprocessing, feature engineering, and hyperparameter tuning, resulting in a **18.56% decrement in training time** and enhanced model efficiency.

Pet Lovers (Full Stack) | *Aug 2023 – Dec 2023*
- **Spearheaded** the development of a pet adoption platform, facilitating 200+ adoptions in the first months.
- **Implemented** secure CRUD operations and **optimized** backend queries, improving data retrieval time by 20%. Integrated React.js, Node.js, and MongoDB to **deliver** a seamless and secure user experience.

Urban Congestion Spread Analysis for Traffic Management (Data Analytics, ML) | *Aug 2023 – Dec 2023*
- **Analyzed** urban traffic datasets and **developed predictive models** that reduced congestion by 15.53%, enhancing urban mobility and optimizing traffic flow in simulated environments.
- **Designed** forecasting models using Python's NumPy and Matplotlib, achieving a 21.34% reduction **in traffic bottlenecks** and a 15.53% improvement in average vehicle speed during peak hours.

Packet Sniffing Tool (Networking, Cybersecurity) | *Apr 2023 – Jul 2023*
- **Developed** "PySniff," a Python-based network packet sniffer capable of analyzing 10,000+ packets per second for real-time traffic monitoring.
- **Fortified** network security by identifying 50+ potential threats during testing, **enhancing** the organization's cybersecurity measures and **improving** network monitoring capabilities.

EXTRACURRICULARS

- **Led** the school Kabaddi team to 3+ championship victories by **orchestrating strategies**, ensuring **seamless communication** among team members, and fostering a culture of discipline and teamwork.
- **Spearheaded outreach efforts** for events that increased membership by 25%, fostering a strong connection between local communities and educational resources offered by the Gujarati Literacy Association

KEY STRENGTHS

- Proven ability to **implement scalable solutions** with measurable outcomes.
- Expertise in **data-driven decision-making** to optimize processes and improve performance.
- Skilled at **leading teams and managing projects** by communicating clearly in fast-paced environments.