Swati Jha

Patna, Bihar | P: +91 6287902201 | swatijha2022@vitbhopal.acin |https://in.linkedin.com/in/swati-jha-33a302246

SKILLS: React.js,Node.js,Machine Learning,Git and Github,Sql
LANGUAGE: C/C++, Python,Html/Css,JavaScript

EDUCATION

VELLORE INSTITUTE OF TECHNOLOGY,BHOPAL Sehore, MP
Bachelor of Technology Expected June 2026
Major in Computer Science Specialization in Artificial Intelligence and Machine Learning

PROJECTS

BIHAR - OUR STATE, OUR PRIDE

- Designed and built a **fully responsive** informational website dedicated to Bihar, implementing a user-centric design that seamlessly adapts to different screen sizes.
- Improved website loading speed by **25%** by optimizing media and file sizes, resulting in a smooth browsing experience across all platforms.
- Utilized **React.js, HTML, and CSS** to create an engaging visual experience, featuring unique content on **history, cuisine, and local news** that enhances user engagement ; **5-page single-page application (SPA)** on Bihar, leveraging **React.js** to deliver a responsive, mobile-first design.
- **Streamlined the development workflow** using **Git** for version control and **GitHub** for collaborative project management.

BUILDING A FLIGHT BOOKING SYSTEM

- Developed an end-to-end flight booking system using Node.js and Express, resulting in a robust backend that efficiently handled over **10,000** simultaneous user requests with minimal latency.
- Executed the modular routing system in Express, which improved application scalability and reduced endpoint response time by **30%**.
- Organized a clean controller structure, leading to a **40%** reduction in development time for new features.
- Integrated MySQL and deployed ORM solutions to facilitate complex database interactions, resulting in a **25% optimization** in query performance and a **20% decrease** in data retrieval times.
- **Established API versioning** with separate route folders, which supported concurrent development for V1 and V2, thus reducing deployment conflicts by **35%.**
- Implemented **CRUD operations** for airplane management, enabling efficient data manipulation within the system and contributing to an increase in overall application performance by **40%.**

INTRUSION DETECTION SYSTEM USING MACHINE LEARNING ALGORITHM

- Engineered a predictive Intrusion Detection System (IDS) to classify network connections.
- Successfully identify four distinct attack types (DoS, R2L, U2R, probing) on the **KDD Cup 10% dataset.**
- Used six machine learning algorithms, with the Random Forest model achieving a top test accuracy of 99.97% and the Gradient Boosting model achieving 99.91% accuracy."
- Demonstrated proficiency in comparative analysis by evaluating models on both training and testing data, identifying a high-performing yet computationally efficient Logistic Regression model with **99.36% test accuracy**.
- Optimized model performance by conducting thorough data preprocessing, enabling a greater than **99% accuracy** on five of the six models.

WORK-EXPERIENCE

Contributor at GirlScript Summer of Code (GSSOC 2023):

- Contributed to open-source repositories by solving 25+ coding problems and performing code reviews.
- Ranked as **26,532.**

NSDC Skill India Certificate – Grade B:

- Certified by the National Skill Development Corporation (NSDC) for Data Structures and Algorithms.
- Achieved 85 out of 100, placing in the top **20%.**

Got Selected as Contributor at Social Summer of Code (SSOC 2026)