Chaitanya Kumar Sinha

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EDUCATION

- Pursuing Bachelors in Technology with a CGPA of 8.84 at VIT Bhopal. *(September, 2021 Onwards)*
- Completed Higher Secondary education at St. Paul's Convent Sr. Sec School, Ujjain, *(June, 2021)* achieving a percentage of 95%.

SKILLS

Python, TensorFlow, Flask, Nginx, AWS, SQL, Linux, AWS.

PROJECTS

Rainfall Estimation and Energy Estimation Model: *(January, 2024 - April, 2024)*

- Engineered Rainfall Prediction System: Implemented an advanced prediction system using Indian rainfall data from 1901-2015, with a comprehensive dataset of 20,000 rows, employing various machine learning models and optimization techniques to enhance forecast accuracy.
- Presented a Research Paper on a novel approach titled "A Study of Optimizations in Rainfall Prediction using Machine Learning Models" at the 4th International Conference on Soft Computing for Security Applications (ICSCSA - 2024).
- Implemented Data Processing and Model Training: Trained machine learning models (Linear Regression, Decision Tree, Random Forest, Artificial Neural Network) and optimized the models to a MAPE score of 0.003414, MSE score of 0.000048.

Phishing Website Detector *(July, 2023 - November, 2023)*

- Constructed a robust and efficient phishing website detector with 94% accuracy that can instantly classify URLs as clean or malicious.
- Created and trained a Random Forest model with a dataset of 1,000,000 URLs, achieving an RMSE score of 0.56 on the test set.
- Launched a real-time Flask model for website deployment, significantly improving user engagement and reducing bounce rate by 25%.
- Designed a user-friendly web interface for seamless URL classification.

INTERNSHIP EXPERIENCE

Printonia LLC (Lead Backend Developer Intern) *(May, 2024 – October, 2024)*

- Designed and deployed a backend database structure from scratch, including ER diagrams, schema optimization, and deployment on AWS RDS.
- Created Flask RESTful APIs with robust authentication levels to ensure secure data access.
- Deployed a Flask server on AWS EC2, integrating AWS services like Route 53 and IAM to enhance reliability and cost efficiency.
- Managed AWS infrastructure to optimize resource utilization, reducing operational expenses while maintaining high service availability.

Bambhari Solutions (Machine Learning Intern) *(July, 2023 – November, 2023)*

- Developed and trained a Random Forest model on 1 million URLs, achieving a 94% accuracy threshold. Conducted large-scale data preprocessing and feature engineering to enhance model reliability.
- Deployed the model using Flask on a web server, allowing real-time classification of website legitimacy. The web interface facilitates easy URL entry and automatic classification.

CERTIFICATIONS

- **AWS Certified Solutions Architect**, AWS *(January, 2024)*
- **Machine Learning Internship Program**, SmartBridge *(November, 2023)*
- **IBM AI Engineering,** Coursera *(January, 2023)*

Extracurricular Responsibility

- **Content Team Lead,** English Literary Association VIT Bhopal *(March, 2023 – April, 2024)*
- **Editor in Chief of ELA Gazette –** an Annual Club Magazine *(March, 2022 – March 2024)*