**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)*