SAI AKHIL TEKURI

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EDUCATION

New York University, Tandon School of Engineering, Brooklyn, New York   09/2023 - Present
Master of Science, Computer Science and Engineering, GPA: 4.0
Relevant Coursework: Artificial Intelligence, Deep Learning, Machine Learning, Big Data, Foundation of Data Science

Indian Institute of Technology Bombay, Mumbai, India   08/2018 - 05/2022
Bachelor of Technology with Honors, Computer Science and Engineering

SKILLS

- C++ | Python | Scala | Java | JavaScript | SQL | HTML | CSS | Node | React | PHP | PostgreSQL | MongoDB | Docker
- PyTorch | TensorFlow | Scikit-learn | OpenCV | Machine learning | Pandas | Data mining | AWS | Git | Jira | Jenkins
- Data warehouse design | Microservices | Android Studio | Backend Development | Full Stack Development| MATLAB

EXPERIENCE

Machine Learning Specialist | *AI for Scientific Research, New York*   01/2024 - Present
- Researched the dynamics of domain walls over time in anti-ferromagnetic magnets using **Python**, **PyTorch**, **OpenCV**
- Developed a **supervised CNN model** tailored for accurately segmenting domain walls within each frame of the video
- Performed **time-series analyses** on the evolution of curvature values of domain walls, **identifying critical patterns**

Software Development Engineer | *Adobe Inc., Bangalore, India*   06/2022 - 07/2023
- Implemented **AWS-based** data ingestion by integrating 4 sources using the **ETL process** to build a **data warehouse**
- Revamped internal tools using **Scala**, **Docker**, and **Jenkins**, resulting in a **10% reduction** in **data processing time**
- Accomplished **20% reduction** in overall **data ingestion time** by **effective data transformation** and storage formats
- Conducted in-depth analysis of **data marts and data vaults**, extracted **business insights**, and reduced cost by **10%**

Product Intern | *Adobe Inc., Bangalore, India*   05/2021 - 07/2021
- Integrated a comprehensive **testing framework** for **networking libraries** across Mac, iOS, and Windows32 in **C++**
- Programmed **16 fault injection tests** simulating **network delay, request timeouts, and network fluctuation**

Research and Development Intern | *GreatFour Systems Pvt. Ltd., Hyderabad, India*   12/2019 - 01/2020
- Developed software using **OpenCV** template matching algorithm for braille script detection, achieved **80%** accuracy
- Automated braille script decoding in **Python** by algorithmically isolating braille characters and translating them

PROJECTS

Ethereum Fraud Detection | *Machine Learning*   09/2023 - 12/2023
- Experimented with multiple **Machine Learning models** for transaction classification and achieved a **96% F1 score**
- Executed pre-processing and trained **Logistic Regression, Decision Trees, and AdaBoostClassifier** models using Scikit-learn, and crafted **Neural Network** model utilizing **TensorFlow** with parameter tuning for model optimization

F1 Race Prediction | *Foundation of Data Science*   09/2023 - 12/2023
- Generated **descriptive statistics, and statistical plot** and conducted **comprehensive analysis** of raw data, employing **feature selection, data cleaning, and reduction** techniques to extract pertinent features/data as part of pre-processing
- Leveraged **ensemble methods** to deploy a **Decision Tree Regressor** to forecast race points resulting in **72%** accuracy

Robot Plate Detection | *NYU RoboMaster*   09/2023 - 12/2023
- Implemented traditional object detection model by extracting **SIFT** features in images and **nearest neighbor** mapping
- Benchmarked the performance of this traditional model with pre-trained **YOLOv5** model sourced from **PyTorch** Hub

JEE Advanced Project | *Research Project*   01/2022 - 05/2022
- Created a candidate portal website using **PHP** which is a one-stop portal for students qualified for JEE Advanced
- Managed reliability of the portal with **2000 hits/sec** using load balancers and encryption for security in **Apache** server

Instagram Clone | *Self Project*   07/2021 - 08/2021
- Replicated Instagram using **Java** within **Android Studio**, utilizing Firebase-v8 for efficient **database management**