SAI AKHIL TEKURI

LinkedIn | +1 (716) 907-9073 | st5050@nyu.edu | GitHub | Portfolio

EDUCATION

New York University, Tandon School of Engineering, Brooklyn, New York 09/2023 - Present
Master of Science, Computer Science, GPA: 3.945

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

SKILLS

- C++ | Python | Java | Scala | JavaScript | SQL | HTML | CSS | Node | React | PHP | PostgreSQL | MongoDB | Streamlit
- PyTorch | TensorFlow | LangChain | LLM | RAG | ChromaDB | Scikit-learn | PySpark | Kafka | Hadoop | Tableau | Git
- OpenCV | ETL | Data warehouse | AWS Microservices | Docker | GenAI Development | Backend Development | Jira

EXPERIENCE

AI Engineer Intern | *Radical AI, New York, U.S.A* 05/2024 - 08/2024
- Built an AI teaching assistant using **LangChain**, **Gemini 1.5 Pro**, and **ChromaDB** to generate concept-based quizzes
- Enhanced the AI's capability to support **15 new document types** by integrating **custom document loaders** in **Python**
- Implemented **Pytest unit test cases** for **document loaders testing**, improving code reliability and ensuring robustness

Machine Learning Specialist | *AI for Scientific Research, New York, U.S.A* 01/2024 - 05/2024
- Researched the dynamics of domain walls over time in anti-ferromagnetic magnets using **Python**, **PyTorch**, **OpenCV**
- Developed **supervised CNN model** for precise segmentation of domain walls in each video frame with **95%** accuracy

Computer Vision Recruit | *NYU RoboMaster Team UltraViolet, New York, U.S.A* 09/2023 - 12/2023
- Implemented traditional object detection model by extracting **SIFT** features in images and **nearest neighbor** mapping
- Reduced the **inference time** by **50%** with **80%** bounding box accuracy compared to the pre-trained **YOLOv5** model

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**
- 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 delays, request timeouts, and network fluctuations**

PROJECTS

Sidewalk Segmentation | *Artificial Intelligence* 02/2024 - 05/2024
- Fine-tuned the **Segment Anything model** from **MetaAI** to segment sidewalks using 200k geo-spacial satellite images
- Achieved a **Mean Dice Loss** of **0.65** and Improved segmentation accuracy by manual annotations to merge sidewalks

Stable diffusion for Pixar Image Generation | *Deep Learning* 02/2024 - 05/2024
- Built a CNN-based autoencoder to reduce the input dimensions to **25%**, enhancing diffusion model training efficiency
- Designed a **UNetDiffusion** architecture to model the Gaussian noise added to the encodings, achieving **MSE** of **0.066**

Predictive Modeling for Solar Energy Production in Europe | *Big Data* 02/2024 - 05/2024
- Trained a **Gradient Boosting Regressor** using **PySpark MLlib** to predict solar energy, attained a **RMSE** of **0.236**
- Engineered real-time solar data streaming with Kafka for solar energy forecasting, visualized using Tableau dashboard

Ethereum Fraud Detection | *Machine Learning* 09/2023 - 12/2023
- Executed **pre-processing** and experimented with **Decision Trees, and AdaBoostClassifier** models using **Scikit-learn**
- Trained **Neural Network** model in **PyTorch** to build an Ethereum transaction classifier with a high **F1 Score** of **0.96**

F1 Race Prediction | *Foundation of Data Science* 09/2023 - 12/2023
- Implemented data cleaning, reduction, statistical analysis, feature selection, to extract pertinent features from raw data
- Leveraged **ensemble methods** to deploy a **Decision Tree Regressor** to forecast race points resulting in **72%** accuracy