Rohan Waghmare

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EDUCATION:

Binghamton University, State University of New York, Binghamton, NY *Expected Graduation: May 2025*
Master of Science in Computer Science

MIT ADT University, Pune, India *Graduation: June 2023*
Bachelor of Technology in Computer Science & Engineering

TECHNICAL SKILLS:

Languages: C/C++, **Python**, Javascript (ES5/ES6), R, Typescript

Frameworks: NumPy, **Tensorflow**, Keras, React.js, **Pandas**, Matplotlib, Scikit-learn, OpenCV, Node.js, Pytest, **Django**, REST APIs

Tools & Databases: Git, GitLab, **AWS**, **Docker**, **MongoDB**, MySQL, Kubernetes, Postman, Linux, Azure, Tableau, PowerBI, Flask

Skills: Machine-Learning, Data-Analytics, Data-Science, Unit-testing, **Agile**, Micro-services, **CI/CD**, SCRUM, **DevOps**

EXPERIENCE:

Data Analyst Intern *September 2022 - October 2023*
Illinois Institute of Technology, Remote

- Developed **Python-based web crawlers** using **Twitter SampleStream API**, **Reddit API**, and **4chan Catalog API** for multi-platform data collection, resulting in a **32%** reduction in data processing time and enhancing technical proficiency by **41%**.
- Employed **Postman API** platform to validate **JSON** responses and streamline data extraction into **MongoDB**, leading to improved data integrity and a **27%** increase in data-driven strategy effectiveness.
- Utilized **pandas**, **numpy**, **matplotlib**, **plotly**, and **seaborn** for data manipulation, analysis, and visualization, improving data interpretation capabilities by **53%** and enhancing presentation skills.
- Integrated **NLTK** for keyword extraction and created dynamic dashboards with **Streamlit** for real-time monitoring and analysis, fostering a **22%** increase in analytical agility and decision-making efficiency.

PROJECTS:

Wallet.io (MERN Application) [link] *December 2023*

- Built a feature rich financial dashboard frontend using **TypeScript** and **React** with **10** visually stunning charts created using **Recharts** and **Material UI** giving information about Profit, Revenue, and Loss on monthly basis suggesting a **4%** growth.
- Engineered the backend architecture using **Node.js** and **Express.js** with **MongoDB** as the database solution and leveraged **machine learning** (linear regression) predicting a **12%** annual growth for the company.

Real Time Sign Language to Text Translator using Deep Learning [link] *June 2022*

- Engineered a real-time sign language to text translation system using D**eep-learning, OpenCV,** and **Long Short-Term Memory (LSTM)** networks for sequence modeling and prediction with categorical accuracy of **96.43%,** helping **6.3%** of the affected population in the country to communicate.

RESEARCH EXPERIENCE:

Detection of Tuberculosis using Transfer Learning [link] *August 2022 – May 2023*
MIT ADT University

- Conducted extensive research and lead a team of **4** students to evaluate the effectiveness of transfer learning models, including InceptionV3, EfficientNetB3, DenseNet201 and ResNet50, for the identification of Tuberculosis (TB) through chest X-ray images.
- Enhanced image quality using Contrast Limited Adaptive Histogram Equalisation (CLAHE), employed semantic segmentation with **UNET** and **GradCAM** for interpretability acquiring **99.95%** accuracy on TBX11K dataset, improving diagnosis for over **2.4 million** people nationwide.

A Comparative Study of Detection of Tuberculosis using Machine Learning and Deep Learning [link] *May, 2023*

- Implemented thorough and meticulous comparative analysis encompassing **21** research papers and **16** transfer learning models.
- Presented the paper at **IEEE** organised 17th INDIACom-2023 10th International Conference on Advances in Remote Sensing and Medical Applications (ARSAMA) at MVSR Engineering College, Hyderabad, India.