

Rohan Waghmare

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EDUCATION

Binghamton University, State University of New York

Master of Science, Computer Science

Binghamton, U.S.A.

Expected Graduation: Dec 2024

School of Engineering, MIT ADT University

Bachelor of Technology, Computer Science

Pune, India

Graduated: May 2023

TECHNICAL SKILLS

Languages: Python, C/C++, Javascript
Frameworks: Django, Tensorflow, React.js, Pandas, OpenCV, React.js, Node.js, Express.js, Streamlit, Next.js, MUI
Databases: PostgreSQL MongoDB, MySQL, AWS (EC2, S3, lambda, API Gateway, SQS, DynamoDB)
Tools & Skills: Git/GitHub, Docker, Kubernetes, Machine-Learning, Data-Science, Full-Stack, Agile, CI/CD

WORK EXPERIENCE

Backend Engineer Intern

Jul 2024 – Present

Flow Global Software Technologies

Wilmington, DE

- Led and managed a team of **12** engineers, building a comprehensive data pipeline integrating **web scraping, Kafka, Amazon S3, data transformation, PostgreSQL, AI models**, and **MongoDB**, containerized with **Docker**.
- Developed web scrapers for **Crunchbase, Pitchbook, LinkedIn**, and **CSV files** to standardize and combine data from multiple sources, reducing inconsistency by **33%**.
- Implemented **Kafka** for data streaming, validated **JSON** data, and achieved **99%** data integrity through schema validation and deduplication. Managed secure data backups in **Amazon S3** with **AES** encryption, and designed storage solutions in **Redshift Data Warehouse**.
- Integrated and labeled data for AI model training, improving AI performance. Developed API calls for AI models using **Django**, enhancing backend functionality.
- Collaborated on cloud platform design and maintenance, contributing to reduced downtime. Conducted **code reviews, testing, and troubleshooting**, improving live production deployment efficiency.

Data Analyst Intern

Sep 2022 – Oct 2022

Illinois Institute of Technology (GlobalShala)

Remote

- Developed Python-based web crawlers using **Twitter and Reddit APIs** cutting data processing time by **32%** and improved data interpretation capabilities by **53%** by utilizing **pandas, numpy, plotly, matplotlib**, and **seaborn**.
- Fostered a **22%** increase in analytical agility and decision-making efficiency by integrating **NLTK** for keyword extraction and creating interactive dashboards with **Streamlit** for real-time monitoring and analysis.

PROJECTS

Wallet-io | *MongoDB, Express.js, React.js, Node.js, Typescript*

(Demo)

- Built a **TypeScript/React** financial dashboard featuring **9+ Recharts/Material UI charts** for monthly Profit, Revenue, and Loss, indicating **4%** growth. Built backend with **Node.js, Express.js**, and **MongoDB**, using **machine learning** to predict **12%** annual growth.

IntelliPDF | *Python, Streamlit, Langchain, Llama3, OpenAI API*

(Demo)

- Created a **Python/Streamlit** app for interactive PDF queries, extracting **10,000+** tokens with **Langchain** and leveraging **OpenAI API** and **Llama3**, achieving **95.3%** accuracy.

Population Density | *React.js, OpenStreetMap, Material UI, Leaflet.js*

(Demo)

- Engineered a geospatial app with **React.js, Leaflet.js**, and **Node.js/Express.js**, visualizing population, live country coloring, and travel coverage, achieving **92.5%** accuracy using **OpenStreetMap** and census data.

Sign Language to Text using LSTM | *Tensorflow, LSTM, OpenCV, Python*

(GitHub)

- Implemented a real-time sign language to text translator using **Deep Learning, OpenCV**, and **LSTM** networks, achieving **96.43%** accuracy and aiding **6.3%** of the affected population.

RESEARCH WORK

Detection of Tuberculosis using Transfer Learning

(GitHub)

- Led a team to evaluate **InceptionV3, EfficientNetB3, DenseNet201**, and **ResNet50** for TB detection via chest X-rays, achieving **99.95%** accuracy on the TBX11K dataset, aiding **2.4M+** diagnoses nationwide. Enhanced image quality with **CLAHE** and used **UNET** and **GradCAM** for segmentation and interpretability.
- IEEE:** *A Comparative Study of Detection of Tuberculosis using Machine Learning and Deep Learning*

EXTRACURRICULAR & CERTIFICATIONS

- Software Engineer** Binghamton Tech Collective
- AWS** Certified Cloud Practitioner
- Nvidia** Fundamentals of Accelerated Computing with CUDA C/C++