

Rohan Waghmare

Binghamton, NY

✉ rwaghmare@binghamton.edu | 📞 (607) 245 6001 | 🐙 Github | 🔗 LinkedIn | 🌐 Portfolio

EDUCATION

Binghamton University, State University of New York

Master of Science, Computer Science

Binghamton, U.S.A.

Aug 2023 - May 2025

School of Engineering, MIT ADT University

Bachelor of Technology, Computer Science

Pune, India

Aug 2019 - May 2023

TECHNICAL SKILLS

Languages: C/C++, Python, Javascript, Java, Swift

Frameworks: Tensorflow, React.js, Pandas, OpenCV, React.js, Node.js, Express.js, Django

Tools & Databases: Git, AWS, Docker, MongoDB, MySQL

Skills: Front-End, Back-End, Full-Stack, Agile, CI/CD, SCRUM, DevOps

EXPERIENCE

Data Analyst Intern

Sep 2022 – Oct 2022

Illinois Institute of Technology

Remote

- Developed Python-based web crawlers using **Twitter API** and **Reddit API** cutting data processing time by **32%** and boosting technical proficiency by **41%**.
- Utilized **pandas**, **numpy**, **matplotlib**, **plotly**, and **seaborn** for data analysis and visualization, and integrated **NLTK** with **Streamlit** for real-time monitoring, boosting data interpretation capabilities by **53%**.

PROJECTS

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

[\[Link\]](#)

- Built a feature rich financial dashboard frontend using **TypeScript** and **React** with **9+** visually stunning charts created using **Recharts** and **Material UI** giving information about Profit, Revenue, and Loss on monthly basis suggesting a **4% growth**.
- Constructed 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.

IntelliPDF | *Javascript, Express.js, React.js, Node.js, Docker, OpenAI API*

- Revolutionized PDF interaction by creating a Chrome extension merging **ChatGPT's NLP and OCR tech**; boosted text explanations' comprehension efficiency by **34%** via context-aware insights.

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

- Implemented a high-performance geospatial analytics app with **React.js** and **Leaflet.js**.
- Programmed backend with **Node.js** and **Express.js**, using a **PostGIS-enabled PostgreSQL DB** for precise spatial queries. Integrated with **RESTful APIs** for data from OpenStreetMap and census databases, achieving **95%** accuracy in population density calculations.

Network Optimization & Analysis Suite | *Rust, C++*

- Engineered a **Rust**-based proxy server and a **C++** UDP Ping toolkit, optimizing network performance with asynchronous IO and TCP/IP enhancements, resulting in a **43%** speed increase and a **31%** boost in diagnostic precision. Integrated SSL optimizations for secure data handling.

RESEARCH WORK

Detection of Tuberculosis using Transfer Learning

[\[Link\]](#)

- Led a team of **4 students** to evaluate the effectiveness of **InceptionV3**, **EfficientNetB3**, **DenseNet201**, and **ResNet50** in identifying Tuberculosis through chest X-rays, enhancing image quality with **CLAHE** and employing **UNET** and **GradCAM** for semantic segmentation and interpretability. Achieved **99.95%** accuracy on the TBX11K dataset, improving diagnoses for over **2.4 million people** nationwide.

A Comparative Study of Detection of Tuberculosis using Machine Learning and Deep Learning

[\[Link\]](#)

- Implemented thorough and assiduous 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 MVSRR Engineering College, Hyderabad, India.