

Rohan Waghmare

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Education

Binghamton University, State University of New York, MS in Computer Science Aug 2023 – May 2025

- **Coursework:** Design and Analysis of Algorithm, Operating System, Computer Networks, Design Patterns, Computer Security, Systems Programming, Data Mining, Social Media Data Science Pipeline, Programming Languages

School of Engineering, MIT ADT University, BTech in Computer Science Aug 2019 – May 2023

- **Coursework:** Computer Architecture, Database Management Systems, Operations Research, Data Structures, Machine Learning, Deep Learning, Big Data Analytics, Web Development, Information Security, Software Engineering & Project Management

Technologies

Languages: Python, C, C++, Javascript, HTML, CSS

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

Databases: PostgreSQL, MongoDB, MySQL, SQL, NoSQL, GraphQL

Cloud & DevOps: AWS (EC2, S3, lambda, API Gateway, SQS, DynamoDB), Docker, Kubernetes, CI/CD

Tools & Skills: Git/GitHub, Linux/Unix, Kafka, RabbitMQ, Redis, REST APIs, pytest, unittest, Selenium, Postman

Work Experience

Software Engineer, Binghamton Tech Collective – Binghamton, NY Aug 2024 – Present

- Worked on the development of the official club website using **React.js** and **Firebase**, achieving a **35% increase in user engagement**, as measured through **click-through rates** and **session duration**, by incorporating improved **UI/UX** designs and real-time updates.
- Optimized backend services for an e-commerce platform using **Node.js** and **Redis caching**, reducing load times by **30%** through the implementation of **asynchronous processing** and efficient data retrieval techniques.
- Contributed to cross-platform development using **Flutter**, enabling the migration of features from a web application to **Android and iOS** platforms, which expanded platform accessibility and increased the user base by **25%**.
- Led sprint planning and collaborated with cross-functional teams in **Agile/SCRUM** settings, ensuring project milestones were met within deadlines while promoting team synergy.
- Assisted in introducing **CI/CD pipelines** using **GitHub Actions** to automate deployment and basic integration testing, laying the foundation for a more efficient development workflow.

Backend Engineer Intern, Flow – Wilmington, DE Jul 2024 – Aug 2024

- Optimized backend applications using **Django**, improving system scalability and reducing **API response times** by **25%** through efficient query handling and code optimization.
- Designed a robust data pipeline for aggregating data from **Crunchbase**, **PitchBook**, and **LinkedIn** into **PostgreSQL**, achieving a **43% reduction in data inconsistencies** through schema validation and efficient data integration workflows.
- Implemented secure **RESTful APIs** using **OAuth2.0** for client authentication, ensuring data integrity and enhancing security.
- Collaborated in a **SCRUM** team to refactor **legacy codebases**, applying **object-oriented principles** and design patterns, which improved code readability and maintainability.
- Preprocessed and managed **large datasets** stored in **AWS S3** for **AI model training**, optimizing workflows for distributed systems and reducing processing time.

Projects

Wallet-io | *MongoDB, Express.js, React.js, Node.js, Typescript* [Link to Project](#)

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

Population Density | *React.js, OpenStreetMap, Material UI, Leaflet.js* [Link to Project](#)

- 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.

Detection of Tuberculosis using Transfer Learning | *Tensorflow, Transfer Learning Models, Python* [Link to Project](#)

- 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.

Certifications & Publication

- AWS Certified Cloud Practitioner
- Nvidia Fundamentals of Accelerated Computing with CUDA C/C++
- IEEE A Comparative Study of Detection of Tuberculosis using Machine Learning and Deep Learning