

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

Experience

- Software Engineer**, Binghamton Tech Collective – Binghamton, NY Aug 2024 – Present
- Spearheaded 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, and published IEEE paper titled [A Comparative Study of Detection of Tuberculosis using Machine Learning and Deep Learning](#)

Certifications

- **AWS Certified Cloud Practitioner**
- **Nvidia Fundamentals of Accelerated Computing with CUDA C/C++**