Rohan Waghmare

rwaghmare@binghamton.edu | 6072456001 | rohanwaghmare.com | /in/rohanwaghmare | /ron103

Education

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

School of Engineering, MIT ADT University Aug 2019 – May 2023
Bachelor of Technology in Computer Science & Engineering Pune, India

Skills

Languages: Python, C, C++, JavaScript, Swift, Objective-C, Typescript, SQL, HTML, CSS

Frameworks: Django, Tensorflow, React.js, Flask, SwiftUI, WatchKit, Pandas, OpenCV, Node.js, Express.js, Streamlit, Material UI (MUI)

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

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

Tools & Skills: Git/GitHub, Linux/Unix, REST APIs, OAuth2.0, RabbitMQ, Kafka, pytest, unittest, Selenium, Postman, Matplotlib

Work Experience

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

- Improved user engagement by **15%** (based on user surveys) by developing the official club website in **React.js** with real-time updates in **Firebase**, leading to more frequent member interactions.
- Enhanced load times by **25%** by implementing caching strategies in a **Node.js** mock e-commerce platform, reducing server response bottlenecks.
- Increased accessibility for members by porting key web features into a **Swift**-based iOS app, ensuring cross-platform availability.
- Ensured on-time project milestones by actively contributing in **Agile/SCRUM** ceremonies and utilizing **GitHub** for collaborative version control.

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

- Optimized **Django** backend applications to reduce **API response times** by **20%** through efficient query handling and code refactoring.
- Decreased data inconsistencies by **35%** by designing a data pipeline for **Crunchbase**, **PitchBook**, and **LinkedIn** feeds into **PostgreSQL** with robust schema validation.
- Implemented secure **RESTful APIs** using **OAuth2.0** for client authentication, reinforcing data integrity and security measures.
- Streamlined development workflows by applying **object-oriented principles** in refactoring legacy code and deploying **Docker**-containerized applications within a **SCRUM** environment.

Projects

Clockin - A Time Tracking Tool | *Swift, SwiftUI, WatchKit* Link to Project

- Developed a clock-in/clock-out time tracking solution spanning iOS and watchOS, incorporating hourly rate calculations and real-time visual analytics. Leveraged **SwiftUI** for intuitive interfaces and **WatchKit** for seamless Apple Watch integration, enabling users to monitor productivity and earnings on-the-go.

Multi-Client File Server Application | *C, Sockets, Concurrency* Link to Project

- Developed a multi-threaded **TCP server** in C, enabling concurrent file operations (upload, download, list, delete) for multiple clients with synchronized data handling and low-latency performance.

Industry-Specific Layoff Tracker | *Python, Flask, MongoDB, Faktory, NLTK, REST APIs* Link to Project

- Designed an automated data scraping pipeline that processed over **208,584 records** from Reddit and 4chan, leveraging **MongoDB** for storage, **Faktory workers** for concurrency, and **Flask APIs** for real-time insights. Implemented toxicity detection with **98% accuracy**, sentiment analysis using **NLTK**, and interactive visualizations with **Matplotlib** and **Plotly**. Enabled actionable insights into unemployment trends, achieving **30% efficiency** gains through dynamic crawlers and historical data integration.

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

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

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.

Certification & Publication

- **AWS** Certified Cloud Practitioner
- **IEEE** A Comparative Study of Detection of Tuberculosis using Machine Learning and Deep Learning