Rohan Waghmare

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Summary

Expert software developer skilled in Python and JavaScript, driven by persistence, perseverance, and passion, experienced in back-end systems and machine learning, ready to build and currently authorized to work for 3 years on OPT without sponsorship

Education

Binghamton University, State University of New York, Master of Science 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, Bachelor of Technology 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

Skills

Languages: Python, C, C++, JavaScript, Swift, SQL, HTML, CSS

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

Databases: PostgreSQL, MongoDB, MySQL, Firebase

Cloud & DevOps: AWS (EC2, S3, Lambda, API Gateway, SQS, SNS, RDS, DynamoDB, Cognito, CloudWatch, IAM), Docker, CI/CD

Work Experience

Software Engineering Apprentice, Michigan Health Information Network – Lansing, MI — Mar 2025 – Present

- Developing a secure, HIPAA-compliant, serverless **Inbox Messaging Platform** using **AWS Lambda (Python)**, **API Gateway (Cognito Authorizers)**, **S3**, and **RDS (PostgreSQL)** for healthcare communications.
- Automated large-scale data extraction from public NPI directories using **Python** and **Selenium**, reducing manual workload by **60%** and improving team efficiency.
- Completed training in **DevSecOps**, **AWS Cloud**, **SDLC**, and applied knowledge of **HL7** and **FHIR** standards.

Software Engineer, Binghamton Tech Collective – Binghamton, NY — Aug 2024 – Mar 2025

- Built and launched a campus-exclusive marketplace web app using **React.js** and **Firebase**.
- Designed and implemented key trust and safety features, including university email verification, real-time messaging, and a flexible user complaint system.
- Led peer code reviews and enforced CI/CD standards to maintain code quality.

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

- Optimized data ingestion for an AI sales assistant by designing smart filters improving lead targeting relevance by **53%**.
- Built scalable pipelines using **Django** and **PostgreSQL** to integrate company profiles from **Crunchbase**, **PitchBook**, and **LinkedIn**.
- Refactored legacy backend systems with **Docker** for streamlined deployments, contributing to an agile **SCRUM** development cycle.

Projects

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

- Built an automated data pipeline to scrape and process over **208,000+ records** from Reddit and 4chan using **Python**, **Faktory workers**, and **MongoDB**, enabling high-throughput concurrency and historical data integration for trend analysis.
- Developed RESTful **Flask APIs** with real-time sentiment and toxicity analysis (**98% accuracy**) using **NLTK**, and delivered interactive visualizations through **Matplotlib** and **Plotly** to surface insights into layoff patterns and unemployment discussions.

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

- Developed a cross-platform time tracking app for **iOS** and **watchOS** using **SwiftUI**, **WatchKit**, and **MVVM**, enabling users to clock in/out, monitor break time, and view daily work summaries with earnings based on customizable hourly rates and time goals.

Detection of Tuberculosis using Transfer Learning | *TensorFlow, Transfer Learning, Python*

- Collaborated with a team to compare **InceptionV3, EfficientNetB3, DenseNet201, and ResNet50** models for detecting tuberculosis from chest X-ray images; achieved **90.95% accuracy** on the **TBX11K** dataset.

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

- Built a multi-threaded **TCP file server** in C supporting concurrent upload, download, list, and delete operations.

Certification & Publication

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