

# Omkar Waikar

347-596-7648 | [ow2130@nyu.edu](mailto:ow2130@nyu.edu) | [linkedin.com/in/omkar-waikar](https://www.linkedin.com/in/omkar-waikar) | [github.com/omkar-waikar](https://github.com/omkar-waikar) | New York, NY

Full Stack Software Engineer | MS in CS NYU | Oracle Certified Java Developer | 2.5 Years Exp

## WORK EXPERIENCE

**Kiya.ai**, Mumbai

Apr. 2024 – July 2024

*Associate Consultant*

- Engineered an AI powered FAQ and support chatbot using **Python** and **FastAPI** by implementing **RAG** with a vector database to automate data retrieval and reduce support tickets by **45%**.
- Optimized LLM inference by implementing **model quantization** within **Docker** containers to increase system throughput by 1/3rd for highly sensitive banking tools and significantly reducing the computational overhead.
- Developed responsive modules using **React** to ensure seamless integration with high concurrency FastAPI backends while streamlining internal business workflows in the BFSI sector.

**LTIMindtree**, Navi Mumbai

Jan. 2022 – Jan. 2024

*Software Engineer*

- Modernized legacy SOAP architectures into **RESTful APIs** using **Java** and **Spring Boot** while achieving **80%** unit test coverage with **JUnit** to ensure code reliability while maintaining seamless data integration between various services.
- Revamped database architecture by optimizing complex SQL queries to achieve a **40% decrease** in execution time and increasing concurrent user capacity by 2x.
- Automated CI/CD pipelines using **Jenkins** and implemented caching strategies to decrease response times and accelerate deployment velocity to ensure maximum system availability for critical financial services.
- Conducted peer code reviews to identify logic flaws early and ensure a **zero production rollback** record for all releases.

**Media Nucleus**, Mumbai

June 2019 – July 2019

*Web Development Intern*

- Designed responsive web pages and resolved UI issues to ensure optimal rendering and cross browser and device compatibility.

## PROJECTS & PUBLICATIONS

**FlowSight: NYC Traffic Collision Analysis and Prediction** | *Kafka, Python, Dask, MongoDB, React, Kubernetes*

- Engineered a real time streaming pipeline using **Apache Kafka** to ingest collision data every 30 seconds and traffic speeds every 5 minutes while storing validated events in **MongoDB** for fast retrieval through **Flask APIs**.
- Implemented a predictive pipeline using **Dask** for distributed data handling and Ball Trees for geo coordinate mapping to train a regression model that identifies high risk areas with 85% confidence in live tests.
- Containerized the full microservice architecture using **Docker** and deployed on a local **Kubernetes** cluster while developing a **React + TypeScript** dashboard to visualize real time crash scores and traffic metrics.

**Deepfake Detection System** | *Python, AWS, PyTorch, TensorFlow, React*

- Developed a web application on **AWS** using **PyTorch** and **TensorFlow** to perform real time image, audio and video deepfake detection while providing model confidence scores for every prediction.
- Exposed model through APIs and implemented secure user authentication workflows to support private user sessions.

**Smart Agriculture System – IRJET Volume7 Issue4** | *Android Studio, Image Processing, CNN, IOT*

- Developed a multilingual Java based Android application integrated with **Google Firebase** and **IoT** sensors to monitor soil pH and moisture levels while automating irrigation cycles remotely based on real time weather data.
- Trained a deep learning **CNN** model using **TensorFlow** to detect crop diseases through mobile image processing and designed an AI chatbot to provide real time market price insights for farmers.

## TECHNICAL SKILLS

**Languages:** Python, Java, C++, AngularJS

**Machine Learning:** PyTorch, TensorFlow, Neural Networks, Scikit-learn, Deep Learning

**Cloud & Infrastructure:** AWS(EC2, S3), Kubernetes, Docker, Kafka, Flask

**Developer Tools:** React, Spring Boot, REST API, Git, Jenkins, JPA, MongoDB, PostgreSQL

## EDUCATION

**New York University**, New York, NY | *Masters in Computer Science*

Sep. 2024 – May 2026

**Achievements:** 1st Place, NYU University Wide Leetcode Bootcamp Challenge

April 2025

**Certification:** Oracle Certified Professional: Java SE 11 Developer

March 2022

**University Of Mumbai**, Mumbai, India | *Bachelors in Computer Engineering*

Aug. 2016 – Oct. 2020

**Achievements:** 3x 1st Place, Annual College Software Project Competition

2016, 2017, 2018