

# Jay Narendrabhai Joshi

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## EDUCATION

### M.S., Data Analytics

January 2024 - December 2025

San Jose State University, CA, USA

Course work: Big Data Technologies, Machine Learning, Deep Learning, Data Mining, Distributed Systems, Generative Model

### B. Tech, Information Technology

July 2019 - June 2023

Birla Vishvakarma Maha Vidyalaya Engineering College, Gujarat, India

Courses: Web Development, Web Security, Software engineering, AI, Machine Learning, Microservice Architecture

## WORK EXPERIENCE

### Software Developer Intern - Launch Pad

June 2023 - September 2023

Ahmedabad, India

- Facilitated the setup of a data pipeline between the company's in-house application and Bloomberg Terminal for a key client, resulting in a ~30% reduction in data retrieval time.
- Created a dashboard application that improved log monitoring efficiency by ~40% for all client applications and enabled scheduling of jobs, **reducing manual intervention by ~50%**.

### Full Stack Developer Intern - MatrixHive Technologies

June 2021 - July 2021

Ahmedabad, India

- Spearheaded the migration and scaling of mission-critical application to AWS, optimizing infrastructure and leveraging services like **EC2, S3, AWS Glue**, and **RDS**, using strategic accelerated response times by ~30%, enhanced overall user experience.
- Implemented MySQL master-slave replication, effectively distributing database load and ensuring high availability, setup **reduced server load by ~35%** and ensured that **essential APIs responded in under a second**.

## PROJECT EXPERIENCE

### Stock Market Prediction

May 2024

- Created an LSTM model through RNN and nonlinear prediction of stock prices, significantly improving prediction accuracy.
- Achieved an increase in prediction **accuracy from ~80% to ~95%** by incorporating market **sentiment analysis, RSI and Bollinger Band** indicators, resulting in more reliable and actionable forecasts.
- Executed the model using **TensorFlow** and **Keras**, allowing for maximum accuracy and customization, reducing **prediction error by ~20%**.

### Hydroponic System Using IoT

May 2023

- Developed a Hydroponic Farming Model with IoT to optimize crop farming, **resulting in a harvest boost of over~50%**, increasing crop yield from 200kg to 300kg per cycle.
- Implemented IoT automation, **enhancing soil fertility by ~40%** and **reducing water usage by approximately ~90%**, cutting water consumption from **1000 liters to 100 liters** per cycle.
- Leveraged IoT and Cloud solutions to **accelerate the harvest cycle by ~20% for herbs**, decreasing growth **time from 60 days to 45 days**, while also providing **robust protection** against pests and diseases.

### Amazon Product Sentiment Analysis

May 2024

- Created AWS Infrastructure for Data analysis of historical and live data using **AWS Glue** for **ETL**, **Redshift** for **Data Warehouse**, **S3**, **RDS** for **Data Storage**.
- Created **RESTful API** for live data using **python**, **Airflow** for orchestration of all tasks. And utilized Tableau for **Data visualization**.

### Be Healthy – Cross Platform Mobile Application

December 2022

- Developed a **cross-platform mobile application** using **React Native** for hospital management with a minimal and adaptive GUI integrating: Admin, Nurse, Doctor, and Patient.
- Implemented **NFC** technology to streamline data transfer, reducing the need for **physical files by ~90%**.
- Utilized **Google Firebase** for real-time database management and **OAuth 2.0** for secure user authentication and tile-based access control.
- Achieved a ~50% reduction in data retrieval times and maintained a ~99% uptime for reliable access to critical medical information.

## SKILLS

Data Structures and Algorithms, Artificial Intelligence, Mobile Applications, Application Testing, LLM, Microservice Architecture, Java, C++, Python, SQL, NoSQL, Java, Kotlin, React Native, JavaScript, NodeJS, Linux, Distributed Systems, Network Security, Machine Learning, Frontend/Backend Development, MongoDB, ReactJS, REST APIs, AWS, OOP, Hadoop, YARN, MapReduce, Spark, AWS, Redshift, Airflow, AWS Glue, Tableau.

## ACCOMPLISHMENTS

- Registered a **Patent** of “Hydroponic System using IoT” at **Indian Patent Office**.
- Participated in the largest **AI Hackathon** at **University of California at Berkeley** on 22-23 June 2024.