

RAJ MEHTA

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EDUCATION

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|---|----------------------------|
| Master of Science in Information Systems , Northeastern University | <i>Expected Apr 2024</i> |
| <i>Coursework: End-to-end Application Development, Big Data Intelligence, Machine Learning, Advanced Data Science</i> | |
| Bachelor of Science in Information Technology , St. Xavier's College | <i>Jun 2018 - Mar 2022</i> |
| Computer Science , University of Notre Dame | <i>Feb 2021 - Dec 2021</i> |

TECHNICAL SKILLS

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|-------------------------|---|
| Programming | Java, Python, SQL, Bash, R, Dart, JavaScript, HTML-CSS |
| Frameworks | FastAPI, Streamlit, Numpy, Pandas, Scikit-Learn |
| Cloud and DevOps | AWS (S3 and EC2), Apache Airflow, Github CI/CD, Docker |
| Database | SQL Server, Postgres, Oracle, MySQL, MongoDB, Snowflake |
| Competencies | AI, ML, Computer Vision, Deep Learning, Software development, Cloud Programming |

PROFESSIONAL EXPERIENCE

Data and Python Engineer, [Eventide Communications](#), Little Ferry, NJ *Aug 2023 - Dec 2023*

- Collaborated with cross-functional teams to extract, transform, and analyze large datasets using **Python**, **JS(AMCharts5)**, and **HTML-CSS** to develop reports and live-dashboards for live 911 call data to effectively communicate insights to clients.
- Developed **Bash** scripts to meticulously export, securely backup, and seamlessly migrate critical **Postgres** data from client systems to Eventide recorders, enhancing operational efficiency and elevating customer satisfaction.

Quality Assurance and Automation Engineer, [DE Shaw & Co](#), Hyderabad, India *Jan 2022 - Sep 2022*

- Translated new website and API enhancements into **Cypress.io**-based test scenarios, collaborating with project stakeholders to identify regression areas, resulting in a 10% increase in overall system readiness and improved deployment efficiency.
- Proposed and successfully implemented an automated bug monitoring system leveraging **Selenium WebDriver**, enabling issue detection in the development cycle, resulting in a remarkable 20% reduction in defects reported post-QA reviews.
- Successfully orchestrated defect logging and categorization through **Python**, adeptly crafted and executed automation scripts for job monitoring using **Cypress.io**, resulting in a noteworthy 5% increase in defect pinpointing efficiency.

AI/ML Engineer, [Dronology](#) - Funded by NASA & NSF, South Bend, IN *May 2021 - Dec 2021*

- Enhanced communication reliability with drones and devices through the implementation of **MQTT** architecture for subscription and publication, resulting in a remarkable reduction of response time from 10ms to an impressive 2ms.
- Conducted rigorous safety testing in **Java** utilizing **mutation testing** on UAV flight plans, validating the effectiveness of the safety algorithm. Achieved an impressive throughput of 1500 test case checks, ensuring robust and reliable UAV operations.
- Contributed research by publishing [papers](#) in esteemed venues such as the International Journal on Software Engineering (**JSS, October 2022**) and the International Conference on Communications (**ICCPs, December 2021**), showcasing innovative findings and advancing the collective knowledge in the UAVs **safety-algorithm** domain.

PROJECTS

Basic Dutch Auction (Smart Contract - Crypto) *May 2023*

- Designed and developed a decentralized Dutch Auction application utilizing **Solidity** smart contracts, ensuring secure transaction management on a **blockchain** platform, providing users with a seamless and trustless auction experience.
- Delivered a comprehensive end-to-end application, handling UI development, rigorous testing of **ETH** transactions from a faucet, and leveraging **IPFS** to enable seamless access for others through an `ipfs://` url. [View project](#)

Meeting Intelligence (Cloud Application, APIs, CI/CD, Apache Airflow, OpenAI) *May 2023*

- Developed an application that leverages the **Whisper API** to convert audio files into text transcripts, subsequently utilizing **GPT API** to pose standard questions streamlining information retrieval and interaction with audio data through **NLP** techniques.
- Employed **Streamlit** to develop an enhanced user experience and interaction. Additionally, implemented custom question functionality, empowering users to inquire about the text content. [View project](#)

Stock Predictor (REST API & Machine Learning) *Mar 2022*

- Built a user-friendly application using the **FinBERT model** to predict stock sentiment and analyze stock positions, integrating financial news from **News API** and **Seeking-Alpha API** for real-time insights.
- The Stock Prediction module uses **Google BERT Summarizer**, **ProcuAI financial model**, and **LSTM model**, to accurately forecast future stock prices, achieving an impressive prediction accuracy of 63.3%. [View Project](#)

Financex (end-to-end Java Application) *Nov 2022*

- Created an end-to-end application, orchestrating the integration **JAVA-ANT** application as the front-end and **SQLite** as the database, while seamlessly fetching real-time data from **NYC, NSE, and BSE APIs**. Skillfully implemented login and portfolio sections, along with broker and brokerage functionalities. [View Project](#)

PUBLICATION

Configuring mission-specific behavior in a product line of collaborating Small Unmanned Aerial Systems, *Journal of Systems and Software* 2022, Md Nafee Al Islam, Muhammed Tawfiq Chowdhury, Ankit Agrawal, Raj Mehta, Daria Kudriavtseva, Jane Cleland-Huang -ISSN 0164-1212, doi.org/10.1016/j.jss.2022.111543 *Oct 2022*