Manan Praful Raval

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EDUCATION

Rutgers University **New Brunswick, NJ**
Masters, Information Technology and Analytics **Dec' 2022**
Courses: Data Structures and Algorithms, Machine Learning, Database Systems, Blockchain and Ledgers

K.J Somaiya College of Engineering **Mumbai, India**
Bachelor of Technology in Electronics Engineering GPA: **3.4 / 4.0** **May 2019**
Courses: Signal Processing, Communication Networks, Software Development, Machine Learning, Algorithms

TECHNICAL SKILLS

- **Software:** Python, Java, C++, SQL, NoSQL, HTML, JavaScript
- **Databases and Stream Processing Technologies:** MongoDB, PostgreSQL, Kafka, MQTT, Redis
- **Technologies/Frameworks:** Amazon Web Services (EC2, S3), Chef, Ansible, Restful services, Spring Boot, APIs, Time Series Analysis, matplotlib, pandas, numpy, Django, Flask, MySQL, Robomongo, DBeaver, Confluence, Jira, Deep learning, Git

EXPERIENCE

Mahindra Susten **Mumbai, India**
Software Engineer, Data Engineering and Science **Aug '19 – Aug '21**

- Developed an e2e Python-Django based customer on-boarding platform to extract data from user defined Excel and process the transformed data into MongoDB, saving 8 hours/week of human effort achieving an error free ecosystem.
- Delivered microservices as customization features to the core services for pushing the data to the third party-applications that allowed users to view the live data availability report in the application.
- Automated the deployment process into CI/CD pipeline to accommodate seamless interaction for new features and updates using Java, Spring Boot, Amazon S3, MySQL, IAM reducing the build deployment time by 90 %.
- Architected and designed a distributed computing data redundancy system for high reliability and low latency of live streaming data using MongoDB, Apache Zookeeper that leveraged the disaster recovery rate for stand-alone servers by 67 %.
- Implemented monitoring system using Python, MQTT, Apache Kafka, MongoDB and Apache Nifi to monitor the stream of messages coming through from MQTT broker to Kafka to MongoDB at a rate of 150,000 messages/min to improve performance bottlenecks that increased stability of application by 43 %.
- Developed a Natural Language Processing model to recognize pattern and classify the significance of Device Failure Alarm Notification for Solar Power Plants achieving a model accuracy of 96.5 percentage.
- Mentored three trainees and helped them in understanding the product specifications and implementations in depth.

Celusion Technologies Pvt Ltd **Mumbai, India**
Software Development Intern **Jun '18 – Aug '18**

- Built a lead recommendation system to locate the nearest lead present around the salesman's location based on specified demographic parameters such as age, occupation, marital status, and education.
- Implemented kNN based clustering to enhance the robustness of the recommender system.
- Achieved 85.6% percentage accuracy on rigorous tests. Presented a demo of the product within 2 months.

PROJECTS

IoT based Local Weather Station | IoT, NodeMCU, Arduino, Microcontrollers, C, C++, Python **Jan'19 - May'19**

- Designed a weather monitoring system for a specific local area which regularly senses several weather factors like temperature, humidity and pressure using sensors in a particular surrounding like school, workplaces, college, etc.
- The sensed data is sent over to a cloud storage called Thingspeak.com where the data can be analyzed, visualized and monitored.

Weather Predictor | Python, SQL, Django, REST, Machine Learning, HTML, CSS **Nov '18 – May '19**

- Led a team of 3 people to build an ML-based time series model to predict future weather with test accuracy of 97.9%.
- Spearheaded development, testing, code pipelines and deployment of an efficient, user-friendly, and attractive web application to display the results driven by running the machine learning model of Weather Forecasting and Prediction.
- Designed the web application using Django to interact with the machine learning model deployed in Python as the back end.

ACHIEVEMENTS AND PUBLICATIONS

Champion Award (Q2, Q3 -2020), Mahindra Susten **December'20**

- Awarded Champion of the Quarter award twice for single-handedly gathering requirements, developing, testing and deploying the customer onboarding platform.

International Research Journal of Engineering and Technology **Feb'20**

- Machine Learning for Weather Prediction and Forecasting for Local Weather Station
  (e-ISSN: 2395-0056, p-ISSN: 2395-0072 (Volume:07 Issue:02) IRJET-V7I294 (International Journal).