Nidhi Zala . Jarvis Consulting

As a recent graduate from Lakehead University, having completed my Master's in Computer Science in January 2023, I bring a positive and organized approach to managing multiple priorities, while also showing a zeal to take on additional responsibilities for reaching team goals. While studying at Lakehead, I have gained expertise in various areas such as performance Algorithm Design, Compilers and Operating Systems, Computational Intelligence, Artificial Intelligence, and Machine Learning, to name a few. Throughout my academic journey, I have worked on multifarious range of projects, related to Database management systems, the Internet of Things, Embedded Systems, Data Modeling, and Visualization, and Web Development using languages like C, C++, Java, Python, javascript, React.js, and much more followed by frameworks like MERN stack, Django, Flask and much more. Having previously worked as a Research and Development Engineer at MTEM in India, I have honed my technical skills and problem-solving abilities, always striving to contribute to the firm's growth. Currently, I am working at Jarvis to further improve my developer skills and work on challenging projects using new technologies such as Docker, Hadoop, Springboot, Maven, REST API, and RDBMS, among others. I believe that being consistent, taking responsibility for one's actions, and being diligent in all that I do, are crucial traits that help me become a better version of myself every day.

Skills

Proficient: Java, Python, Linux/Bash, RDBMS/SQL, Agile/Scrum, Git, SQL, MERN stack development, IoT, Google Cloud Platform GCP

Competent: Embedded Coding, Data analysis and Visualization, Django, Flask, Docker

Familiar: R, AWS, PowerBI, .Net, Data Mining

Jarvis Projects

Project source code: https://github.com/Jarvis-Consulting-Group/jarvis_data_eng-NidhiZala

Linux Cluster Monitor [GitHub]: This system enables users to monitor the machine specifications and usage data of multiple Linux systems. The monitoring agent gathers information on the hardware of each machine using Bash scripts and stores it in a PostgreSQL database that is provisioned with Docker. Resource utilization data is collected automatically using Crontab and can be analyzed using SQL queries. The tool was tested on a virtual machine running the CentOS7 distribution of Linux on the Google Cloud Platform, and every script was meticulously checked to ensure that it met all the requirements.

Core Java Apps [GitHub]:

- JDBC: The application comprehends the database operations using Java namely, CRUD operations(create, read, update, and delete).The Java-based app is developed utilizing a Postgres database and JDBC both operating in a containerized format using Docker container. For the purpose of passing objects across classes and modules DAO and DTO design principles are used and desired outputs are achieved.
- GREP: Similar to the egrep tool this project aims to read all the files in the provided directory and tries to search for the regex expression that has to be searched in the program. The project uses Java, Lambda, Steams and Regular expression for designing and attaining the outputs

Highlighted Projects

Mind Machine Interface [**Published by Journal :IJRESM**]: This project is an aid for disabled people. It helps the person to control objects using their brain sensing. Observing the movements in the signals and coding on the sensors, MATLAB helped to achieve the expected outcomes.
Phase 1 - Controlling a single device with contraction and relaxation of neurons in hand. This project conducted the tests on a Servo Motor which could turn on and off by fetching movement of neurons basically, contraction and relaxation of the fist.
Phase 2 - Controlling devices inside the house like fans and bulbs with the help of brain signals produced, This technology can be used for people with disability in terms of providing ease where they can control everything with the help of signals.

ChatterBox the Realtime Chat Application [**Accepted under IEEE**]: Real-time chat application with features like chatting, screen sharing, Audio call, Video call, and much more with a great user interface and smooth transitions throughout the webpage. The project was based on the MERN stack (Mongo DB, Express.js, React.js, Node.js) so that it is easily extendable and up to date

Smart Toll Plaza: It is a user-friendly application/wallet where the user can add their money to the wallet just like a usual app, for instance, as we add money in our amazon pay. The wallet is connected to embedded chip requirements, the customer just passes by the toll Plazas and will have an automatic deduction of their toll tax, without waiting in queues for the same.

Smart Trash Collector: This project is utilized for Locating Bins in the city and sending alerts to the city corporation. The data based on the harmful gases that are being released from bins and the level of bin filled is processed and notified. It is a GPS-inclusive app for trash collection to locate the bin's position, collect the garbage, and replace them on time.

Smart Irrigation: An Embedded system along with the Android application for remotely maintaining switches in the farms and monitoring crops followed by alerts if any issues occur. Furthermore, a feature to turn the system in the field on and off remotely is added.

Smart Parking: It is an Embedded systems project to automate the ease of parking.A hardware-based project made with the help of multifarious sensors to guide a person to locate the empty parking space along with guiding them to efficiently park the vehicle and save parking space. Beneficial for both customers and the parking facility.

Professional Experiences

Software Developer, Jarvis Consulting Group (2023-present): I have been involved in multiple projects that necessitated the utilization of various technologies such as Linux, Bash, Docker, Postgres, Java, and Spring Boot. In each project, I adopted the Scrum/Agile methodology, along with Git and Git Flow.

Junior Software Developer, Uniq Data Solution (04/2021 - 08/2021): My tasks included to work on new projects and develop interactive interfaces for clients.I worked with Django, Java, python and SQL technologies to get the desired outcomes.Communicate with the clients to know their expectations, elevating the project by making changes.Work under teams to achieve the milestones set for the project. Stay up to date with new technologies and attain the best products out of all the knowledge gained.

Research and Development Engineer, (MTEM) Make the Ends Meet (2019-2021): I have been working on various projects, based on the embedded systems designed. The tasks included designing projects based on the embedded product requirements, using Internet of things techniques for hardware development followed by web development using various software and languages like C, C++, Java, Python, and front-end technologies.

Education

Lakehead University (2021-2023), Master in Computer Science, Computer Engineering

Navrachana university (2016-2020), Bachelors in Technology Computer Science, Computer Engineering

Miscellaneous

- IBM INTERNET OF THINGS - ADVANCE CERTIFICATE
- NEURAL NETWORKS & DEEP LEARNING (COURSERA)
- INTRODUCTION TO DATA SCIENCE IN PYTHON (COURSERA)
- BUILD FULL WEBSITE WITH WORDPRESS (COURSERA)
- MACHINE LEARNING API' S (QWIKLABS)
- INTRO TO ML ~ LANGUAGE PROCESSING (QWIKLABS)
- INTRO TO ML ~ IMAGE PROCESSING (QWIKLABS)
- INTERMEDIATE_ML ~ TENSORFLOW GCP (QWIKLABS)
- GCP ESSENTIALS (QWIKLABS)
- BIGQUERY FOR MACHINE LEARNING (QWIKLABS)
- BASELINE ~ DATA, ML, AI (QWIKLABS)
- CLASSICAL INDIAN VOCALIST
- GOOGLE DEVELOPERS CLUB MEMBER
- ORGANIZER AT VADOADARA INTERNATIONAL MARATHON (4 YEARS)