Radhika Venkateshrao Kulkarni

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Career objective: To obtain a challenging position in a high quality engineering environment where my resourceful experience and academic skills will add value to organizational operations.

Work Experience:

RELX Group- Author Profiling Team – Research and Technology Domain

From August 2022- August 2023 – 1 Year

Projects/Tasks Handled:

JAVA development:

Development contribution towards EKB project:

Title 1: Adjust manual curation code to box off EKB articles from core articles and preprint articles.

Description: Making sure existing manual curation is not altered with the introduction of EKB articles into MHub. Manual curation support still continuous to be only for Scopus articles.

Programming language: JAVA

Tools used: SQL Developer, Eclipse, Git

Title 2: Collect the details of Batch names, articles for 5 percent EKB data with respect to the non-English articles and get the data for Non-English Author with respect to the Articles, Grants and EKB in the total number of articles.

Description: Considering the first name initials starting with&, (, 0,1, 2,3,4,6, 7, 8, 9, . , &, ', |. Finding the Total number of articles in the dbcollection with Non-English first_initial of 5 percent EKB. Classified how many of them have articles and Grants which are EKB.

Tools used: SQL Developer, Winscp, Putty

Title 3: Fix the impacted Junits after introducing boxing off changes.

Description: Ensuring that all the test cases are successful in AP and if any Junit is failing due to some changes in the functionality or implementation, fixing those test cases.

Programming language: JAVA

Tools used: SQL Developer, Git

Title 4: Check the coverage of the individual class

Description: Calculate the average percentage of the total coverage for AP module test case suite.

Programming language: JAVA

Tools used: SQL Developer, Git

Title 5: New DS features implementation for D2M generalization along with JUnits

Description: Implement the set of features provided for the D2M generalization by considering the set of articles EKB, CAO etc.

Programming language: JAVA

Tools used: SQL Developer, Git

Python/Data science:

Development contribution towards CNS project:

Title 1: Analyse the CNS profiling scripts. Ensure the CNS scripts can cover the boxing off requirement.

Description: Collected the snapshots of the DB collection where the parquet files will be loaded as an input for the CNS. Understood the schemas and tables involved in the process.

Matching happens within a Name Signature in AP. To get the matching profiles within two different Name Signature, filter needs to be applied like email, address, and compatible name.

Tools used: AWS EMR cluster, PyCharm, Winscp, Putty

Programming Language: Python

Title 2: Create a new DS computational instance for Paola.

Description: Create a new EC2 instance for DS work Point the EC2 app instance to same DB instance which Mark is pointing to. Name the dir under Paola. Rename the existing dir by name Mark.

Bring up the new RDS env by shutting down the two static DB env. Get the confirmation from Jerry to deactivate the RDS instances created for 5% EKB process.

Tools used: PyCharm, Winscp, Putty

Programming Language: Python

Title 3: Ap2 application deployment in Paola's Machine

Description: Deploy the AP2 master code base at /efs/58/home/ap2/DSTeam/Paola location and update the required configurations.

Test and verify the application by running BG task with small set of name signatures. To avoid Run time exceptions.

Tools used: PyCharm, Winscp, Putty

Programming Language: Python

Academic Projects:

Projects Handled in RV collage while pursuing master's with respect to Data science:

Title 1: Detection of Weeds in Agricultural Crops Using Deep Neural Networks

Description: The proposed system works based on Deep Neural Network algorithms aiming to help farmers. It involves the process where early detection of weeds will be carried out by detecting the plant which is growing in the field is crop/weed.

The methodology involves the images collected from the different sources were fed into the system after removing the noise/distortion using fisheye correction method. Grey scale conversion to be done to further to carry out the detection and classification.

The Algorithms Used: DNN, ResNet50, InceptionV3 from Deep Neural Network and YoloV4 from Image Processing.

Results: The performance comparison of algorithms with accuracy of 55.79% for ResNet50, 98.28% for InceptionV3 and 98.71% for Deep Neural Network algorithms respectively. From this we can conclude that DNN algorithm gives highest accuracy compared to others.

Projects Handled in SKSVMACET while pursuing bachelor's with respect to IoT:

Title 2: Nirbhaya Yukti Yojana (Women Safety Gadget)

Description: The proposed system works based on IoT technology aiming to provide women safety. Raspberry-Pi is the central part, which is interfaced with SOS alert button, camera, GPS receiver, Audio recorder to work simultaneously in Raspbian OS Firebase in Android studio helps to create the web to view the features by downloading it. User can access the application. When the victim clicks the SOS alert button, on a single click it sends message to the registered contact numbers along with the tracked location, captured images and audio recording whereas video is stored in SD card.

Tools: Firebase server, Raspbian OS, Pycharm, Raspberry-Pi kit with SOS alert button, camera, GPS receiver, Audio recorder, Android Studio.

Programming language: Python

Achievement: Nirbhaya Yukti Yojana (Women Safety Gadget) project has been selected for (Karnataka State Council for Science and Technology) KSCST funding program in Bangalore for the year 2020.

Skills:

Programming Languages:

Java: Keywords, Identifiers, Variables, Operators, Objects, Class, Data types, Functions, Control statements, Strings, oops concepts, Collections, File Handling, Junits, multithreading.

Python: Modules, Functions, Control statements, oops concepts, Collections, File Handling, Lambda functions, Strings and Literals.

C++: Keywords, Identifiers, Variables, Operators, Strings, Objects, Class, Data types, Functions, Control statements, Strings, oops concepts, pointers, reference, arrays, multithreading, Namespaces, Dynamic memory, Exception handling.

C: Keywords, Identifiers, Variables, Operators, Objects, Data types, Functions, Control statements, Arrays, Pointers, Structure and Union.

Data Visualization Tools:

Excel, Tableau, Google Data Studio

Databases:

MongoDB: CRUD operations

Cassandra: CRUD operations

MySQL: Data types, Operators, Functions, CRUD operations, joins, Aliases, Primary key, Foreign key, Clauses like Order by, Group by, Having, Exists, select, where, like, min, max, sum, count, avg, Unique

Operating Systems:

Linux, Windows

ML algorithms:

Supervised algorithms, Un-supervised algorithms, Reinforcement Learning algorithms.

Agile Methodology:

Knowledge of Sprint planning**,** Stand up calls**,** Retrospective

Git:

Committing the code, Creating new branch from master code base, Raising Pull Request, Code review, Merging the changes.

HTML:

Elements, Attributes, Heading tags, styles, paragraphs, formatting, Quotations, Comments, Colors, Forms, Graphics, Media, API's and references

CSS:

Selectors, colors, Background, Margin, Padding, Outlines, link, fonts, images, Responsive, List, table, display,Positions, Combinators

Certifications:

- White Belt Security Journey from RELX
- Yellow Belt-In Depth Security for Development Community from RELX

Paper publications:

Title 1: "A Survey on Weed Detection using Emerging Technologies"

Journal: High Technology Letters (HTL)

Volume: 28, Issue: 8, August-2022

Title 2: "Detection of Weeds in agricultural crops using Deep Neural Networks"

Journal: International Journal of Advance Research Ideas and Innovations in Technology (IJARIIT)

Volume: 8, Issue: 3, V8I3-1454, ISSN: 2454-132X, Year: 2022

Educational Details:

Course	Institution/University	Grade/Percentage	Y o P
M.Tech in Information Technology	RV college of Engineering, Bangalore	8.2 CGPA	2022
BE in Information Science and Engineering	SKSVMACET college, Lakshmeshwar	6.69 CGPA	2020

Key Strengths:

- **Interpersonal skills**: As a friendly, polite person, with positive attitude I work well with team members and in the past often have proven myself to deal with difficult situations in a careful and considerate manner.
- **Learning skills**: I have a high capacity for learning, pickup new skills and ideas quickly, and generally thrive on challenges.

Acknowledgement:

I hereby declare that all the details provided above are true to the best of my knowledge.

Radhika V. Kulkarni