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EDUCATIONAL QUALIFICATION

- Doctor of Philosophy (PhD) – Computer Science – In progress
- Master of Science – Computer Science
- Bachelor of Technology – Information Technology Percentage –

TECHNICAL SKILLS

Programming Languages	Python, Java, PySpark, SQL, PLSQL, HTML, JavaScript, Unix Shell Scripting
Big Data Ecosystem	Spark, MapReduce, Hive, HDFS, PIG, Spark Streaming
Cloud Services	AWS, S3, Lambda, RDS, RedShift
Database	Oracle, MS SQL Server, MongoDB, DB2, MySQL, MS Access
Python Packages	Pandas, Numpy, Matplotlib, Scikit-Learn, TensorFlow, Beautiful Soup, JSON, Django Framework
ML and DL Concepts	Linear Regression, KNN, KMeans, Naive Bayes, Decision Trees, SVM, Neural Networks, CNN, RNN, LSTM
Tools & Version Control	PyCharm, Eclipse, Anaconda, Jupyter Notebooks, Visual Studio, PuTTY, SVN, GIT, Bitbucket, SQL Server Management Studio, Weka, Elasticsearch

ACADEMIC PROJECTS

- Online Digital Library – Web Programming (Django Framework, Elasticsearch and Mysql)
    - Developed a search engine to enable efficient access to dissertation topics, utilizing Elasticsearch to store and index 15GB of documents.
    - Designed and implemented the user interface (UI) using the Django framework, ensuring a user-friendly experience.
    - Utilized MySQL to manage user details and incorporated features within the UI for users to like and save favorite topics.
    - Implemented a user profile maintenance page, enabling users to manage their preferred topics from search engine results.
    - Employed Docker containers for seamless storage and deployment of the project.

- Trojan Attack in Deep Neural Networks – Machine Learning (Python notebooks)
    - Developed a cutting-edge solution to safeguard neural networks from hacks and attacks.
    - Implemented a classification technique to identify potential attacks, ensuring network integrity.
    - Utilized gradient descent to detect and identify hidden trojans within images.
    - Proposed a watermarking approach for machine learning (ML) designs to enhance security and prevent attacks.

- Covid Impact on Sales data analysis – Data Science (Python, Google colab)
    - Conducted a comprehensive analysis to examine the impact of Covid-19 on retail market sales.
    - Combined and analyzed datasets from retail stores and Covid-19 sources to gain valuable insights.

- Access Log Analysis for Cyberthreat monitoring – Big Data Analytics (Pyspark- Python)
    - Analyzed access logs in real-time to ensure server security and detect any potential threats.
    - Monitored every event and visualized the country of origin based on IP addresses.
    - Implemented monitoring mechanisms to track heavy traffic access and gather timestamp details.

- Covid Impact on Americans – Data Visualization (R programming)
    - Conducted an in-depth analysis to examine the response of Americans to the Covid-19 pandemic.
    - Utilized various datasets, including Covid Federal, Unemployment, Crime, and New Business datasets, to gather comprehensive data.
    - Explored the effects of the pandemic on job loss and studied how individuals adapted and reacted to the situation.
    - Found that a significant number of Americans were able to transition into new job opportunities and pursue entrepreneurial ventures.
    - Currently working on concluding the analysis to provide a comprehensive understanding of the overall impact.

- Research Project – Discussion Forum - a study with accessibility users using different NLP methodologies.
    - Investigated language usage on accessibility forums predominantly accessed by screen reader users.
        - Performed topic modeling to understand user conversations related to the forum thread.
        - Aimed to identify the factors that contribute to the usefulness of these forums and how they can inform the design of conversational assistants for individuals with visual disabilities.
        - Analyzed the language patterns and interactions to understand the differences and potential gaps that need to be addressed.
        - Worked towards bridging the identified gaps by proposing improvements and innovative approaches to enhance conversational assistant design for individuals with visual disabilities.

- Research Project – Document Analysis and Interaction with Chat-GPT
    - Investigating the document analysis with SAM models to understand the different segments.
    - Prompt engineered – ChatGPT with domain related to documents.
    - Understanding different document analysis model transformers.

PROFESSIONAL SUMMARY

- 10+ years of programming experience in Analysis, Design and Implementation of Business Applications using the Oracle Relational Database Management System (RDBMS) and NOSQL Database.
- Experienced in developing ETL using Python, PySpark and R and SCRUM environment and building using GitHub, Docker.
- Proficient in designing ETL from data sources like Oracle, MongoDB, RedShift, Athena, and S3 using Python, R, SQL, PySpark.
- Experienced in handling large datasets for data cleaning using Partitions, Spark in Memory capabilities, Broadcasts in Spark, optimizing Joins, and RDD Transformations during ingestion process.
- Good exposure on Performance Tuning for Oracle RDBMS and knowledge in working with UNIX shell scripting and query optimization.
- Good experience in creating SQL Queries, PL/SQL package, function, stored procedure, triggers, cursors and effectively using Oracle Built-in packages.

- Expertise in Dynamic SQL, Records, Arrays and Exception Handling.
- Worked on **ETL** Processes consisting of Data extraction, data mapping, data manipulation, transformations, and loading.
- Hands on experience of working with Joins, Table Partitioning, Collections, Analytical Functions and in database administrative duties like Grants, Loads and Export/Import and performance.
- Good Experience in Data analysis, Data Migration, Data Modeling, Data profiling, Data Quality, Data Integration and Database Design, Data warehouse.
- Experience in technical and analytical skills with clear understanding of design goals of ER modeling for OLTP and dimension modeling for OLAP.
- Functional Responsibilities: Involved in all phases of the Software Development Life Cycle from analysis, design, development, testing, implementation and maintenance with timely delivery, requirements gathering, functional gap analysis, module setup script generation testing and production support.

EXPERIENCES ADP Company, Norfolk - (Feb 2019 – Till date) Role:

Sr. Software Engineer

Responsibilities:

- Develop and maintain all customized oracle applications according to business requirement for configuration.
- Design detail specifications for all application development and design various oracle database and evaluate all design and coding activities.
- Develop and customize all oracle applications and provide an effective interface for all business requirements and support to all vendors to resolve all business issues.
- Manage and resolve various Oracle applications for all service tickets.
- Perform troubleshoot on all oracle application issues and provide postproduction support and prepare test scripts on all applications and implement all fixes.
- Implement various Oracle tools and scripts to identify any issues and collaborate with business users to implement all test applications.
- Automating the manual efforts and provided efficient process on time.

Competent Systems - Moody's Analytics, NY - (Nov 2018 – Jan 2019) Role:
Database Consultant

Responsibilities:

- Utilized PL/SQL tables and bulk collections to perform very quick loading of data. Extensively used SQL Loader to load data into the target tables.
- Actively involved in optimization and tuning of **SQL** queries through utilizing the explain plan to find out the problem area of the query.
- Data Analysis primarily identifying Data sets, Source Data, Source Meta Data, Data Formats and Data Definitions.
- Created and manipulated stored procedures, functions, packages and triggers.
- Involved in Development of End - to - End Application from Data Transfer from Source system applications till report generation.
- Worked on Dynamic SQL by using Execute Immediate and DBMS_SQL along with Bulk Collect.
- Worked on Table partitioning and Index creation to improve the performance of the query.
- Involved in Requirement gathering, High level Design, Development, Unit testing.

- Extensively used the advanced features of PL/SQL like Records, Tables, Object Types and Dynamic SQL.
- Involved in the Development of **ETL** processes such as data transformations, data sourcing, mapping, conversion and loading with Informatica Power center.
- Worked on Exception Handling, to trouble-shoot **PL/SQL** code and to display the error messages in the application.

Photon Pvt Ltd - State Street – Japan (Jan 13 – Jan 15) Role:
Senior PL/SQL Developer

Responsibilities:

- Prepared Program specification for the development of **PL/SQL** procedures and functions.
- Used Oracle packages like DBMS_STATS to collect statistics of tables as an aid to improve performance of application.
- Involved in working with implicit cursors, explicit cursors and Ref cursors.
- Involved in creating various utility scripts to generate log files in **UNIX Shell scripts**.
- Developed stored procedures and Triggers to facilitate consistent data entry into the database.
- Worked with Business Analyst clients to clarify business requirements, map them to systems capabilities, and recommend technical solutions.
- Used UTL_FILE packages for writing DBMS_OUTPUT into the files.
- Worked on SQL*Loader to load data from flat files obtained from various facilities every day.
- Developed the SQL*LOADER, external tables to accept the data from third party systems.
- Created Tables, Complex SQL queries and Correlated sub queries, Nested queries, Views and Function based Indexes for effective Business Application Development.
- Used **Explain Plan DBMS Profiler** for tuning the PL/SQL blocks.
- Monitored the Production batches and fixed the issues within **SLA.**
- Debug data quality issues by analyzing the up-stream sources and provide guidance to team
- Performed Unit test on the developed code to ensure that its bug free.

Photon Pvt Ltd - Estee Lauder – USA (Jul 12 – Jan 13) Role:
Oracle Developer

Responsibilities:

- Involved in analysis, design and coding of Oracle processes in **PL/SQL** to build packages.
- Created Oracle Stored Procedures to implement **ETL** Process control logic.
- Created Tables and sequences for data load capture. Loaded the data into the tables using **TOAD** and **SQL*plus**.
- Scheduled jobs using UNIX shell scripting.
- Loaded the data into the oracle external tables with Oracle Loader from the flat files.
- Extensively worked on Explain plans and table partitioning for **Performance tuning.**
- Worked on effectively creating packages and stored procedures for different transformation logic.
- Worked on the AWR and ADDM reports for efficient performance tuning.
- Analyzed data to check for Data Integrity and Referential Integrity when loaded to source staging tables.
- Prepared the **Data Analysis Queries** for Validating the Data into Source systems.

Mastek Pvt Ltd - STG – P&C Onebeacon – USA (Jul 10 – Jan 2012) Role: Oracle Developer

Responsibilities:

- Created Database objects such as Tables, Indexes, Views and Constraints.
- Worked with users and application developers to identify business needs and provide solutions.
- Created many complex SQL queries for the Oracle reporting.
- Implemented Data validations using Database Triggers.
- Designed Oracle views that generate these extracts for upstream applications and created ETLs to read these views and drop them in a file.
- Created Oracle Stored Procedures for different Transformation logic.
- Performed Unit Testing for the various modules developed.
- Automated Quality Check tasks by creating PL/SQL procedures, cursors, functions and dynamic SQL. Enhanced it with creating exceptions for error handling. Created triggers for auditing purpose.
- Used SQL Hints and Indexes as needed to improve SQL performance.
- Used UTL_FILE to load the data into Oracle tables from FLAT, CSV and Text Files.
- Worked on all phase of the project life-cycle**.**

MRR Pvt Ltd - Kameleon UK (Jun 09 – Aug 2010) Role: Pl/SQL Developer

Responsibilities:

- Developed **PL/SQL Packages**, Procedures and Functions accordance with Business Requirements for loading data into database tables.
- Created **SQL*Loader** scripts to load data into temporary staging tables.
- Created Views by joining multiple cash flow tables to show output as report to the user.
- Used File Handling in Oracle to read and write into files associated with the modules.
- Tuned pre-existing PL/ SQL programs for better performance.
- Used import export utilities such as **UTL_FILE** for data transfer between tables and flat files.
- Worked with built-in Oracle standard Packages like **DBMS_SQL and DBMS_OUTPUT.**
- Performed SQL and PL/SQL query tuning and optimization using tools like **EXPLAIN PLAN, SQL*TRACE, TKPROF** and **AUTOTRACE.**