

Padmanaban Rajan

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EDUCATION

The University of Texas at Arlington | Arlington, TX

December 2023

Master of Science in Information Systems

Anna University | Chennai, India

November 2020

Bachelor of Engineering in Electronics and Communications

RELEVANT COURSEWORK

Python Programming, Applied Database Management, Object Oriented Programming and Data Structures, Computer Architecture, Computer Networks, Data Warehouse and Business Intelligence, Advanced Methods for Analytics, Web and Social Analytics.

PROFESSIONAL EXPERIENCE

HR Data Analyst Intern | Volvo Group | Macungie, PA

January 2023 – December 2023

- Spearheaded the design and implementation of a Java-based HR analytics module, contributing to a 15% increase in data processing speed. The module provided crucial insights, enabling faster decision-making and process optimization.
- Developed a Python automation script for routine HR data validation tasks, resulting in a remarkable 20% reduction in manual effort and a 25% decrease in data discrepancies. This automation streamlined HR data validation processes, improving data accuracy.
- Led data analysis efforts using R to identify trends and patterns in HR performance metrics. The insights generated through R-driven analysis facilitated data-driven decision-making, contributing to a substantial 30% improvement in overall HR process outcomes.
- Optimized SQL queries for the HR database, leading to a notable 25% reduction in query response time. The database optimization efforts significantly enhanced the overall system performance, ensuring efficient data retrieval and processing.

IT Data Analyst | Anjusoftware India Private Limited | Chennai, India

December 2019 – December 2021

- Analyzed system specifications for business requirements, conducted data analysis, modeling, and solution implementation using Oracle SQL. Translated BRDs into use-cases and context diagrams, utilizing UML for visual system modeling.
- Devised KPIs using SQL across company website in collaboration with cross-functional teams to achieve a 30% jump in organic traffic.
- Analyzed, documented, and reported user survey results to improve customer communication processes by 18%.
- Collaborated with analyst and HR teams to oversee end-to-end process surrounding customer's return data.

TECHNICAL COMPETENCIES

Data Modeling, SQL (Oracle, MySQL), Java, Python, C, R, SAS, Azure, Power BI, Tableau, Data Visualization, Apache Spark, Hadoop, Data Analysis, ETL Process, Data Warehousing, Data Mining, Business Intelligence, Dashboard Development, Microsoft Office Suite, JIRA.

CERTIFICATIONS

- Certified Google Data Analytics Professional, Google.
- Tableau Data Visualization Professional, Google.

November 2023

October 2023

PROJECTS

Spotify Music Data Analysis

August 2023 - October 2023

- Applied Python with libraries such as scikit-learn and TensorFlow for data analysis and machine learning, achieving a 97% accuracy in predicting song popularity. Integrated Git for version control and streamlined code in Jupyter Notebook.
- Executed a cross-platform analysis using Python and SQL, applying data engineering techniques to compare song popularity, revealing a 25% increase on streaming services compared to traditional radio.
- Employed Python with Matplotlib, Seaborn, and Tableau for data visualization. Utilized Docker for environment management, assessing the influence of artist attributes on song success and identifying shifts in music preferences.

Distributed E-commerce System Development

January 2023 - April 2022

- Implemented a high-performance Java-based e-commerce platform for 100,000 users, achieving sub-2-second response times.
- Achieved 99.5% data consistency by integrating RabbitMQ for inter-service communication and MySQL for database management.
- Conducted stress testing and optimization, resulting in a system capable of processing 1,000 orders per hour with enhanced reliability.

Network Security Simulation Project

March 2022 - May 2022

- Created a Java-based simulation environment to illustrate various network attacks and defenses across 500 virtual nodes.
- Successfully detected and mitigated attacks like DDoS and SQL Injection in real-time, enhancing the value of network security courses.
- Developed and tested multiple security protocols, significantly improving understanding of network vulnerabilities and countermeasures.

Big Data Analytics on Social Media Trends

January 2022 – May 2022

- Configured a 10-node Hadoop cluster, utilizing Apache Spark to process 10 TB of social media data, cutting query times by 90%.
- Performed comprehensive analytics to identify key trends and patterns, yielding valuable insights for targeted marketing strategies.
- Used data visualization tools to represent datasets, improving understanding of consumer behavior and social media dynamics.