**MADHU TANNERU**

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***Professional Summary:***

A highly motivated data analyst with a robust background in data mining, statistical modeling, and data visualization. Proficient in SQL, Python, R, and Excel to extract valuable insights from extensive datasets. Demonstrated success in collaborating with cross-functional teams to inform strategic business decisions.

* Having 5 years of experience as a Data Analyst, production support, database management, and strategic analysis.
* Working experience in database technologies compatible with geospatial data extract/transform/load (ETL) processes (e.g., Spark Databrick, PostgreSQL, Oracle Spatial, etc.)
* Excellent Knowledge in Data Analytics, Data Validation, Data Cleansing, Data Verification, and Data warehouse.
* Strong working knowledge across the technology stack including ETL, Databricks, Snowflake, SQL, Spark, PySpark, AWS QuickSight, Snowflake, and data pipeline.
* Be versed in Amazon Web Services, Google Cloud Platform, Dell Boomi, and/or Microsoft Azure cloud solutions, architecture, related technologies, and their interdependencies.
* Experienced in generating Data lineage, runbook, and documenting Metadata while designing OLTP and OLAP systems environments.
* Experience in working with both Agile and Waterfall methodologies (JIRA).
* Have an in-depth knowledge of agile, and Kanban working environments and have a good understanding.

of Software Development Life Cycle (SDLC) methodologies and principles.

* Experience/Good knowledge of “DevOps” methodologies including automation processes.
* Experience in source code management, reporting, requirements management, and project

management using Team Foundation Server (TFS), GitHub, SVN Repositories as well as other.

Source Control Repositories.

* Experienced in working data governance, data security (CCPA), Data migration, and interacting with data stewards to understand data issues that prevent a superior quality of data.
* Excellent experience in writing Python, and PySpark SQL queries to validate data movement between different layers in a data lake (lake House and delta lake) environment.
* Firsthand experience with Data Science libraries in Python such as Pandas, NumPy, sci-kit-learn, Matplotlib, Beautiful Soup, etc.
* Experience in Data profiling, Data Analysis, Data Cleansing, and Data Masking.
* Experience with CI/CD pipelines such as Concourse, Jenkins
* Experience in preparing Unit tests, developing Test Plans, Detailed Test Cases, writing Test Scripts by decomposing Business Requirements, and developing Test Scenarios to support quality deliverables.0420
* Experience with developing analytics and machine learning systems on Linux/Unix
* Experience with schema design, queries, and optimization for SQL/NoSQL databases
* Experience with Salesforce.com, Tableau, SQL, SAP – HANA, and MicroStrategy
* Extensive statistical modeling experience (regression, classification, clustering)
* Experience working with cloud-based or big data technologies (e.g., Databricks)
* Data architecture, and data modeling experience. Experience building microservices on the cloud.

***Education:***

* B. Tech Mechanical Engineering, VIT - Vellore, India, 2018.
* MSc Renewable Energy Management, Cranfield University, UK, 2019.
* M.Sc. Business Analytics, University of North Texas, USA, 2023.

**Technical Skills:**

* **Programming Languages:** SQL, Python, R, Java, T-SQL, UNIX shell Scripting, PySpark, SAS, MATLAB
* **Database:** AWS, Azure, GCP, S3, IBM cloud, HDFS, PostgreSQL, MongoDB, Hive QL, Snowflake
* **Tools**: Tableau, Power BI, Amazon QuickSight, Office suite (Word, Excel, MS Project, and

Outlook), Data Warehouse, Azure Data Factory (ADF), Azure

Databricks, U-SQL, Azure Analysis Services (SSAS), Databricks

Delta (Delta Lake), Azure Data Lake Analytics, Azure Data Lake

Store (ADLS), Airflow, Hevo and Rudderstack

* **ETL/ Big data:** Databricks, Spark, PySpark, snowflake, Hadoop, HDFS, Git, CI/CD, Data Modeling,

Star-Schema Modeling, Informatica, Snowflake-Schema Modeling, and Pivot Tables

* **Cloud:** AWS (EC2, S3, EBS, VPC, and RD), Azure, GCP
* **Methodologies:** Agile, Scrum and Waterfall, JIRA, Data Catalog

**Professional Experience:**

Flexi-van Leasing LLC, Scottsdale, AZ **May 2023 – Present**

**Data Analyst**

* Worked with the Project Manager and Business Intelligence to understand the business requirement.

and involved in planning, defining, and designing data based on the chassis business requirements.

* Built out the data and reporting infrastructure from the ground up using SQL, Python and Tableau to provide real-time insights into the product, marketing funnels, and business KPIs.
* Designed and developed the dashboard for chassis live navigation and monitor the data migration process.
* Worked on data profiling and data validation to ensure the accuracy of the data between source to target systems (Data Lake and warehouse)
* Ensure Data Quality and Reliability. Design and implement various Data Quality methods in SAS and Big Data. Run quality checks against the databases and report all data issues. Identify data anomalies and detect the source of data problems. Recommend data quality solutions.
* Worked on various libraries in Python (Pandas, NumPy, Boto, NLP, etc), and PySpark to perform Extract, Transform, and Load operations on data (ETL) from **AWS (S3 one lake) to Snowflake.**
* Strong hands-on experience with creating dashboards, data visualizations and analytics using Tableau Desktop.
* Developed an analytically capable data pipeline to identify loopholes in data access and thereby close them forever by working with APIs, thus reducing the risk of data vulnerability/mismanagement.
* Extensive knowledge on Data Profiling using Informatica Developer tool.
* Collaborating with data engineers and operation team to implement ETL process, wrote and optimized SQL queries to perform data extraction to fit the analytical requirements.
* Integrated data from various Data sources namely Oracle, MSSQL Server, IBM, and PostgreSQL using Informatica to perform Extraction, Transformation, and loading (ETL processes).
* Engineered a robust ETL process that adeptly deduces container trips from one location to another, leveraging GPS data from chassis with a keen focus on efficiency and precision.
* Devised versatile data pipelines collaboratively with the Integration team, employing Rest APIs for Salesforce, shell scripting for NetSuite, and AWS Glue for seamless data extraction and integration from RDS and sources.
* Implemented a solution through shell scripting to monitor database locks, facilitating prompt notifications to the team for enhancing application efficiency.
* Developed SQL scripts for creating tables, Sequences, Triggers, Views, CTE, and materialized views.
* Creating pie, doughnut, bar, scattered, radar, and surface charts in Excel, Origin and Prism.
* Performing exploratory data analysis and data investigation using Alteryx, SQL, and Python.
* Expert in Tableau Desktop 10.x/9.x, Tableau Reader and Tableau Server Experienced in analysis, modeling, design, and development of Tableau reports and dashboards for analytics.
* Integrated data from various Data sources like Oracle, MSSQL Server, IBMDB2, Teradata using Informatica to perform Extraction, Transformation, loading (ETL processes).

**Technology and tools:** SQL, Python, AWS S3, AWS Redshift, Data Lake, Spark, PySpark, Git, Oracle, PostgreSQL, Power BI, Snowflake, Salesforce, MS Excel, Agile Scrum, Tableau, Qlik sense, Qlik view and LINUX.

University of North Texas, Denton, TX  **Aug 2021 – May 2023**

**Data Analyst**

* Develop monthly, quarterly, and annual reporting dashboards that bring together multiple data sources from across the university’s portal and generate insights and inform business decisions.
* Writing simple and advanced SQL queries and scripts to create standard and ad-hoc reports for senior managers.
* Evaluated Complex ETL Mappings and Sessions based on business user requirements and business rules to load data from source flat files and RDBMS tables to target tables.
* Developed requirements analysis, data analysis, data mapping, report development, testing, report modification, and documentation.
* Conducted data audits to ensure the accuracy of student’s data and implemented encryption and access controls for information security.
* Automated insights of real-time data from the CrowdStrike platform and generated dashboards on tools Power BI based on the severity of the student’s data breach and their devices.
* Reduced the data breaches up to 85% on university systems and collaborated on incident response plans for proactive cybersecurity followed up by data protection measures and vulnerability assessments.
* Experience with reporting tools such as Power BI, Business Objects, Tableau, etc.
* Exporting data across various platforms to produce reports using Tableau and Excel delivering concise, accurate, and actionable reports.
* Transitioned several reports into Tableau creating more interactive and actionable dashboards, well received by management and end users.
* Write SQL queries to answer analytical questions and explore multiple driving factors of hospitalization.
* Analyze complex SQL queries of in-scope reports and identify critical elements, and complex calculation logics and capture them in requirements template.
* Designed and implemented basic SQL queries for testing and report/data validation.
* Designed and Developed pre-session, post-session routines and batch execution routines using Informatica Server to run sessions.
* Developed complex mappings/sessions using Informatica PowerCenter for data loading.
* Enhanced performance for Informatica sessions using large data files by using partitions, increasing block size, data cache size and target-based commit interval.
* Coordinate with data stakeholders to capture technical metadata and lineage.
* Collaborate with business and technical stakeholders on maintaining a metadata repository.
* Performed metadata validation, reconciliation, and appropriate error handling in ETL processes.
* Provided analysis, understanding, and business perspectives on maintenance and enhancement issues.
* Extract data from various data sources and prepare interactive dashboards utilizing various kinds of charts, graphs and filtering data using logical filters and publishing them.
* Creating exceptionally reliable dashboards, reports, and presentations for a wide range of customers.
* Involved in Exploring, Designing, Building, and Deployment of high-level dashboards for the Board of Directors, Decision makers for critical metrics using Tableau.
* Experience in database management and Data Lineage IBM Cloud Pak using applications.
* Creating database objects like tables, temporary tables, views, stored procedures, functions, indexes, triggers, PIVOT in SQL Server 2008, 2012.
* Used data sources from SQL, Oracle, SSAS cubes and files to generate reports in Tableau.
* Experience in creating reports in Power BI, MicroStrategy, Informatica and Tableau.
* Hand-on experience in designing the data conversion strategy, development of data mappings and the design of Extraction, Transformation and Load (ETL) routines for migrating data from diverse sources.
* Supporting clients as a Subject Matter Expert (SME) through troubleshooting, preparing ad-hoc reports and presentations.
* Created SSIS packages using SSIS to validate, extract, transform and load data-to-data warehouse databases, data mart databases, and process SSAS cubes to store data to OLAP databases.
* Transferred the data from SQL Server 2005 to SQL Server 2008R2 database using SSIS.
* Used SSIS for data population from various sources and created SSIS packages for data conversions and load data from flat files and vice versa.
* Extracted data from the databases (Oracle and SQL Server) using Informatica to load it into a single data warehouse repository of Teradata.

**Environment:** SQL MS 2008, Python 3.x, Tableau 9.x, 8.x, Power BI, MS Excel, Oracle, PostgreSQL, Informatica, Metadata, ETL, Teradata, SSIS, SSAS, Agile Scrum, CrowdStrike

Envytee Info Solutions Pvt Ltd, India. **Feb 2020 – Aug 2021**

**Role: Data Analyst**

* Developed and executed quality assurance procedures for data collection from research experiments and analyzed and developed models using machine learning.
* Utilizing machine learning models for predictive analysis.
* Encoding with Scikit-learn preprocessing.
* Segmentation based on machine learning and statistical modeling effort including building predictive models and generate data products to support customer segmentation.
* Cleaning data and ensuring data quality, consistency, integrity using Pandas, NumPy.
* Plotting data points and establishing linear and polynomial regression and calculating associated parameters like R2 and P value etc.
* Experienced in using supervised, unsupervised and regression techniques in building models.
* Utilizing natural language processing (NLP) techniques to optimize customer satisfaction.
* Created and presented project status updates and project reports (MS Excel, Power Point) to the senior management.
* Managed importing data from different data sources into HDFS using Sqoop and performing transformations using Hive, Map Reduce and then loading data into HDFS.
* Exported the analyzed data to the relational databases using Sqoop, to further visualize and generate reports for the BI team using Tableau.
* Collecting and aggregating enormous amounts of log data using Flume and staging data in HDFS for further analysis
* Analyzed the data by performing Hive queries (Hive QL) to study customer behaviour.
* Conduct cost-benefit analysis to evaluate the monetary impact of proposed solutions and assist in decision-making.
* Extensively used ETL to load data from SQL databases.
* Worked on data profiling and data validation to ensure the accuracy of the data between the warehouse and source systems.
* Developed data mapping documentation to establish relationships between source and target tables including transformation processes using SQL.
* Enhanced performance for Informatica sessions using large data files by using partitions, increasing block size, data cache size and target-based commit interval.
* Constructed complex SQL queries to generate reports and visualize the data in Tableau dashboards.
* Analyzing research results and preparing peer reviewed publications, presentations.
* Expert in Tableau Desktop 9.x/8.x, Tableau Reader and Tableau Server and Experienced in analysis, modeling, design, and development of Tableau reports and dashboards for analytics.
* Publishing workbooks and extract data sources to Tableau Server, implemented row-level security and scheduled automatic extract refresh.
* Working with the sales and Marketing team for Partner and collaborating with a cross-functional team to frame and answer important data questions.

Environment: SQL MS 2008, Tableau 9.x, 8.x, Microsoft Power BI, Python 3.x, SAS, Oracle 10g, NumPy, ETL, Waterfall, Informatica

Cranfield University, UK  **Sept 2018 – Sept 2019**

**Role: Data Analyst**

* Investigated failure modes of the sonar system, systematically assessing the criticality of components to enhance system reliability and performance.
* Designed a comprehensive inspection and maintenance plan based on life cycle data analysis, optimizing component longevity, and minimizing downtime.
* Evaluated CAPEX and OPEX for a 100 MW offshore wind farm, leveraging data from the Vestas prototype in Aberdeen, UK, contributing to informed decision-making on project feasibility and financial viability.
* Conducted rigorous risk and reliability tests, including Fault Tree Analysis (FTA) and Failure Mode and Effect Analysis (FMEA), ensuring robust assessment of potential system vulnerabilities and failure scenarios.
* Applied advanced tools such as Orcaflex, ABAQUS, Excel, PTC Windchill, and MATLAB/Python in project execution, highlighting proficiency in diverse technologies and analytical platforms.
* Involved in reviewing business requirements, analyzing data from data sources like excel/SQL Server for design, development, and production rollover of reporting within Tableau desktop.
* Created action filters, parameters, and calculated sets for preparing dashboards and worksheets in tableau.
* Create or enhance existing applications utilizing Microsoft Access and SQL Server
* Developed Tableau workbooks from multiple data sources using Data Blending.
* Defined best practices for creating tableau dashboards by matching requirements to the charts to be chosen, color patterns as per user needs, standardizing dashboard size, look and feel.
* Fine-tuned SQL queries for maximum efficiency and performance.
* Built dashboards for measures with forecast, trend lines and reference lines.
* Published workbooks by creating user filters so that only concerned teams can view them.
* Developed Cumulative workflow diagrams for scrum to track work items.
* Participated in daily stand-ups with clients on daily design and development effort.
* Accessed and transformed massive data sets through filtering, grouping, aggregation, and statistical calculation.
* Worked on generating OTC Derivatives volumes by total trade, incoming/outgoing payment items, number of new transactions.
* Interfaced with business users to verify business rules and communicated changes to the ETL development team.
* Prepare the data rules spreadsheet using MS Excel that will be used to update allowed values, findings, and profiling results.
* Used statistical techniques to describe data using groups, bins, hierarchies, sorts, sets, and filters to create focused and effective visualizations.
* Created SQL queries for Report Mapping, Report Layout and Data Flow Diagrams
* Created a library of presentation templates by topic for future use.
* Ability to correspond with clients, responding to their questions and concerns with detailed information, while adhering to the company's policies and procedures.
* Adapt to a changing environment and circumstances and Identity potential showstoppers and escalates to the senior management.

**Environment:** MS Office Suite, Windows 7, MS SQL Server, MS Project, UML, Erwin, Business Objects, Informatica, HTML, XML, Oracle, MS Visio, MS Access, SAS, DB2, Tableau, Orcaflex, PTC Windchill, ABAQUS.