**VENKATA SAI SHANKAR VATTEM**

**Business Intelligence | Data Engineering | ETL Development**

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**PROFESSIONAL SUMMARY:**

* Over 9 years of experience in database analysis, design, development, and testing.
* Proficient in **SQL**, **Oracle, SSIS**, **Power BI, Power Automate, Power Flow, Azure Synapse, Azure Database, Snowflake and Data Warehousing.**
* Experience in crafting efficient **T-SQL and PL/SQL** queries, creating Stored Procedures, User Defined Functions and Database Triggers.
* Skilled in developing SSIS packages for seamless data integration.
* Ability to design and implement **ETL workflows to extract, transform, and load data into the data warehouse.**
* Ability to optimize data warehouse performance through indexing, partitioning, and query optimization techniques.
* Proficiency in dimensional data modeling and design **(star schema, snowflake schema)**.
* Profound ability to transform raw data into impactful visualization dashboards using **Microsoft Power BI and Tableau.**
* Well-versed in Azure technologies including **Azure Data Lake, Azure Data Factory and Azure Databricks.**
* Experience in designing and building flows using Power Automate’s visual interface to connect various services and systems.
* Designed and implemented **end-to-end data pipelines using Microsoft Fabric,** leveraging OneLake for unified data storage.
* Developed **ETL workflows with Microsoft Fabric’s Data Factory**, integrating diverse data sources into a centralized analytics platform.
* Utilized **Fabric’s Data Engineering capabilities (Spark and SQL)** to process large-scale datasets for machine learning and AI applications
* Experience in creating **Paginated Reports using Power BI Report Builder.**
* Implemented dynamic parameters in paginated reports to enable users to interactively filter and customize data.
* Successfully integrated various data sources into Paginated Reports, establishing connections to databases.
* Proficient in creating complex **DAX** formulas to perform calculations and aggregations.
* Designed and implemented efficient data models using **DAX** and implemented row level security using **DAX expressions.**
* Demonstrated expertise in utilizing **DAX** time intelligence functions to create advanced date-based calculations, such as Year-to-Date, Moving Averages and Period-over-Period comparisons.
* Developed approval workflows using Power Automate to streamline decision-making and authorization.
* Ability to implement error handling and exception management within **Power Automate flows.**
* Proficiency in designing forms in Power Apps to capture and display data, including validations, rules, and formatting.
* Experience in integrating Power Apps with other Power Platform services like **Power BI and Power Automate.**

**TECHNICAL SKILLS:**

* **Databases:** MongoDB, PostgreSQL, PL/SQL, Oracle, MS SQL Server, Snowflake, DBT, Onelake.
* **ETL & Data Warehousing:** SSIS, Azure Synapse, Snowflake, DBT, Informatica, Data Factory.
* **BI & Reporting Tools:** Power BI, Power BI Report Builder, Tableau, Excel.
* **Cloud and Big Data:** Azure Synapse, Azure SQL, Onelake.
* **Programming Language:** Python, SQL, Java, Scala.
* **Automation and Integration:** Power Automate, PowerApps, Smartsheet.
* **Version Control:** Azure Devops, Git, GitHub.

**PROFESSIONAL EXPERIENCE:**

**MARYLAND STATE DEPARTMENT OF EDUCATION (MSDE), Baltimore, MD**

**April 2024 – Present**

**Power BI Developer**

* Designed and developed **Educator Workforce and Strategic Planning Dashboards** for K-12 school staff across Maryland. <https://marylandpublicschools.org/about/Pages/DEE/educator-dashboard.aspx>
* Created **Power BI dashboards and reports** for internal and public stakeholders, ensuring data accuracy and compliance.
* **Optimized Power BI performance**, implementing best practices for efficient data modeling and visualization.
* **Proficiency** in using **python libraries such as pandas and NumPy** to extract and integrate data from various sources.
* Integrated **Power BI within Microsoft Fabric** for real-time data visualization and interactive reporting.
* Implemented real-time analytics using **Fabric’s Event Stream** capabilities for processing live data feeds.
* Optimized data workflows with **Fabric’s Lakehouse architecture**, enabling efficient data modeling and governance.
* Leveraged **Microsoft Fabric’s AI/ML integration** for predictive analytics and model training using Python and Spark.
* Developed few **Smartsheet forms** using Smartsheet for Federal reporting, Tenable Vulnerability applications, Community Schools Annual reporting for various departments as a member of Department of Information and Technology

**Environment:** MS SQL Server, Excel, Power BI, Python, Smartsheet, Microsoft Fabric.

**HUSSMANN CORPORATION, Bridgeton, MO**

**September 2023 – March 2024**

**Datawarehouse/ETL developer**

* Migrated **SSIS packages to Azure Synapse Pipelines**, improving data processing efficiency.
* **Developed** new **Synapse Pipelines** which execute the code to trigger Stored Procedures, Dim and Fact tables, Power BI Datasets and track them using tables in Azure Synapse DB.
* Providing **daily support** for all the **ETL activities** during business hours, by **troubleshooting** various jobs and synapse pipelines whenever there is a failure and develop the solution immediately.
* Implemented machine learning models for predictive analytics using **Python libraries** like **scikit-learn** and **stats models** to identify trends and forecasts for business decisions.
* Developed and optimized **Synapse pipelines**, cutting execution time from **1 hour to 35 minutes**.
* Expertise in manipulating large datasets with **pandas** to filter, aggregate, and transform raw data into actionable insights.
* Experience with SQL queries and integration of **Python** with databases (MySQL, PostgreSQL, MS SQL Server) to pull data for BI reporting.
* **Optimized SQL queries** within DBT to enhance data transformation processes and improve overall performance.
* Automated data ingestion, transformation, and reporting within **Microsoft Fabric** to improve business intelligence insights.
* Worked with **Microsoft Fabric’s security and governance features**, ensuring data compliance and access control.
* Explored the convergence of **Microsoft Fabric with Azure AI and Synapse** for advanced analytics and AI-driven decision-making.

**Environment:** MS SQL Server, Python, PL/SQL, Oracle, SSIS, Azure Synapse, DBT, Azure DB, Power BI, Excel, DBeaver, System I Navigator, Visual studio, Microsoft Fabric.

**HUMANA, Louisville, KY**

**Oct 2019 – Aug 2023**

**SQL/Power BI Lead Developer**

* Conducted thorough **Data analysis and Data Profiling** to assess Data quality, devising strategies for Data cleansing and transformations.
* Oversaw **end-to-end project lifecycle**, encompassing Design, Scoping, Development, Code review, testing strategies, and on-time Deliveries.
* Collaborated closely with **business stakeholders, gathering requirements**, and creating wireframes for effective design.
* Developed intricate **Stored Procedures, Triggers, and Functions** utilizing T-SQL, Snowflake, and Oracle.
* Experience in **designing and building** custom applications using **Power Apps** for various business processes.
* Experience in **designing and building** **flows** using **Power Automate’s** visual interface to connect various services and systems.
* Implemented **Row-level security** on **Power BI** to ensure data privacy.
* Knowledge of using **Direct Query or Live Connection** to connect Power BI to live data sources without importing data.
* Ability to clean, transform, and shape data using **Power Query Editor** within Power BI
* Extracted complex data sets from **Snowflake, SQL Server** and other sources using **Power BI’s Query Editor**, providing crucial insights to business stakeholders and serving as a trusted advisor.
* Led a team in **designing and implementing a scalable data pipeline**, resulting in a 40% reduction in processing time.
* Proficiency in setting up high availability solutions (failover groups, geo-replication) and disaster recovery strategies for **Azure databases**.

**Environment:** MS SQL Server, T- SQL, PL/SQL, Oracle, DBT, SSIS, Azure, Power BI, Tableau, Excel, Power Apps, Power Automate, Snowflake.

**FLEXASOFT, Seattle, WA**

**May 2017 – September 2019**

**SQL/Power BI Developer**

* Collaborated in BRM (**Business Requirement Meeting**) sessions with clients to finalize Business Requirements.
* Developed robust **ETL packages in SSIS**, extracting and loading data from various sources including SQL databases, Flat files, SharePoint, and Oracle.
* Designed and implemented pivotal **Power BI Reports** for executive leadership.
* Expertise in crafting intricate **CTEs, Sub Queries, Joins, and cumulative queries** for diverse Power BI Reports and Dashboards.
* Ability **to integrate and analyze data** from various sources using Synapse’s data integration features.
* Implemented **data quality checks** and validation frameworks, **reducing data errors by 25%** and improving overall data accuracy.
* Expertise in **creating and orchestrating data pipelines** that involve data movement, transformation, and analysis.
* Formulated **measures and calculated columns using DAX** to deliver advanced analytics within Power BI reports.
* Successfully **migrated** numerous **Excel reports to Power BI**, enhancing data visualization capabilities.
* Proficiently composed **database queries**, **leveraging Joins, Indexes**, and actively participated in the creation of Tables, Views, Stored Procedures, Functions, and Triggers using T-SQL while maintaining database integrity.

**Environment:** MS SQL Server, T- SQL, PL/SQL, Oracle, SSIS, Azure, Power BI, Tableau, Excel.

**CERNER CORPORATION, Kansas City, MO**

**June 2016 – April 2017**

**SQL Developer**

* **Experience in automation** of administrative tasks like creating maintenance plans, creating Jobs, Alerts using SQL Server agent and monitoring and troubleshooting the jobs.
* **Provide training and write documentation** that allow data engineers to understand and support the systems.
* Designed server-side **T-SQL scripts for data manipulation and validation** and created various snapshots and materialized views for remote instances.
* **Monitored performance and optimized SQL queries** for maximum efficiency using SQL Profiler and Database Engine Tuning Wizards.
* Involved in creating dynamic well-organized, **accurate and insightful reports/dashboards** using slicers, filters, calculated columns, conditional formatting and drill down properties to support strategic decisions.
* Experience in installing, maintaining and troubleshooting the **Personal and On-Premises Gateway.**
* Developed and published **Power BI reports to workspace** and scheduled the dataset for automatic refresh and configured an alert system if refresh fails.
* **Data Migration** from On-premises to azure cloud, azure SQL server

**Environment**: SQL Server 2012/2007/2000, Microsoft BI Suite 2012, Visual Studio, Power BI, SSMS, SSRS, SSIS, MS Azure.

**Tripod Software Solutions, Hyderabad India**

**Jan 2015 – Dec 2015**

**SQL Developer**

* Experience in creating **SSIS packages** to extract data from different sources like SQL Server, MS Excel, transform and then load into Dimension and Fact tables in Data Warehouse using SSIS.
* Performed data cleansing to remove unnecessary columns, eliminate redundant and inconsistent data by using **SSIS transformations**.
* Implemented **error & failure handling** in SSIS packages using event handlers, row redirects and check points.
* Created **views, constraints, stored procedure, temp tables, CTEs** and effective DDL/DML triggers to facilitate the automation of data entry by front end application.
* Created **DML Triggers** to restrict data manipulation events on certain business hours.
* Developed **ETL packages** and customize database applications by coding in SQL Server.

**Environment**: SQL Server 2012/2007/2000, Microsoft BI Suite 2012, SSMS, SSIS.

**EDUCATION:**

* **Master’s in Computer Science,** University of Central Missouri, Missouri (2016 -2017)
* **Bachelor’s in Electrical and Electronic Engineering**, JNTU, Kakinada, India (2011- 2015)