### ****Project Title:****

### **Global Electronics Retailer – End-to-End Business Intelligence Solution**

### ****Project Description:****

### **This project involved building a complete Business Intelligence solution for a Global Electronics Retailer, a company that operated across three continents between 2016 and 2021. The objective was to analyze historical data, uncover business insights, and develop advanced tools to support decision-making.**

### ****Data Source:****

### **Multiple CSV files containing sales, customers, products, and regional information.**

### **Time range: 2016 – 2021.**

### ****Data Understanding & Modeling:****

### ****ERD & Mapping:****

### **Designed the Entity Relationship Diagram (ERD) and mapping after deeply analyzing and understanding the raw data.**

### ****OLTP Database:****

### **Implemented database schema based on the ERD.**

### **Loaded data from CSV files into OLTP using **SSIS**, structured into 3 containers (Reference Data - - Master Data – Transactions).**

### **Developed **Views, Stored** Procedures**, and Triggers** to support business operations.**

### ****Data Warehouse (DWH):****

### **Designed a **Star Schema** for analytics.**

### **Migrated data from OLTP to DWH using **SSIS ETL**.**

### ****Cubes (SSAS):****

### **Built OLAP cubes to enable multidimensional analysis and advanced querying.**

### ****Reports (SSRS):****

### **Created paginated reports tailored for detailed reporting needs.**

### ****Visualization & Dashboards:****

### ****Power BI:****

### **Sales performance dashboards.**

### ****Pareto Analysis** to identify the “vital few” products and customers driving most of the revenue.**

### **Trend analysis over time and across continents.**

### ****Tableau:****

### **Interactive dashboards comparing regional and product performance over years.**

### **Geographical sales analysis and growth vs. decline trends over years.**

### ****Advanced Analytics:****

### ****AI Product Search System:****

### **Implemented advanced product search with **AI-powered recommendations** using **Grog’s Llama 33 70B** model.**

### **Enabled intelligent recommendations to enhance customer experience and support business decisions.**

### ****Highlighted Insights:****

### **Identified best and worst-performing products, categories, and territories.**

### **Discovered key factors behind business performance between 2016–2021.**

### **Demonstrated the importance of data-driven decision-making in retail.**

### ****Skills Used:****

### **Database Design (OLTP & DWH)**

### **ERD & Data Mapping**

### **ETL with SSIS (Reference, Master, Transactions Containers)**

### **Views, Stored Procedures & Triggers**

### **Star Schema Modeling**

### **SSAS Cubes**

### **SSRS Reports**

### **Power BI & Tableau Dashboards**

### **Pareto Analysis**

### **AI-powered Product Search (Llama 33 70B)**

### **Business Intelligence Lifecycle**

### **KPI Analysis & Data Visualization**