🌎 World Layoffs Analysis 📊

🔎 Project Overview

This project dives into the **global layoff trends** 🌐 by analyzing **layoff data from 2020 to 2023**. The data is **cleaned and processed** using **SQL Server Management Studio (SSMS)** 🛠️, while **interactive dashboards** are built in **Power BI** 🎨 to uncover **patterns, trends, and key factors** driving layoffs across industries and countries.

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🌐 Data Sources

The primary dataset used is **WorldLayoffs**, which contains **detailed layoff records** across **companies, industries, and countries** from **2020 to 2023**.

🛠️ Data Cleaning & Preparation

To ensure **data quality** and **consistency**, the following steps were performed:

✅ Creating a Duplicate Table 📂
A backup table, **layoffs_analysis**, was created to preserve the integrity of raw data.

✅ Removing Duplicate Entries 🗑️
Common Table Expressions (**CTEs**) were used to eliminate redundant data.

✅ Standardizing Data 📝
- 🔹 Trimmed unnecessary spaces
- 🔹 Corrected inconsistent values

✅ **Handling Null & Blank Values** ⚠️

- Replaced **blank values** & **"NULL" strings** with actual **NULL** values

✅ **Filling Missing Values Using Self-Join** 🔁

- Missing **industry values** were inferred using a **self-join** on the company column

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📊 **Exploratory Data Analysis (EDA)**

Comprehensive EDA was performed to identify key trends:

- 📍 **Company-wise Layoffs** 🏢
- 📍 **Industry-wise Layoffs** 🏭
- 📍 **Country-wise Layoffs** 🌍
- 📍 **Yearly Layoffs Trend** 🗓️
- 📍 **Rolling Total Layoffs** 📈
- 📍 **Top Companies with Highest Layoffs (Yearly)** 🏆
- 📍 **Country-wise Top Industry Layoffs** 🏗️

🧮 **Power BI Measures**

Power BI **DAX measures** were implemented to **enhance visualizations** and **extract deeper insights**:

- 🔹 **Rolling Total Calculations** 📈
- 🔹 **Ranking Industries by Layoffs** 🏭📊
- 🔹 **Identifying Top Industries by Country** 🌍

🎨 **Visualizations**

📊 **Power BI dashboards** were designed to create **interactive and dynamic insights**. A **star schema** was used to structure the data into **fact and dimension tables**, enabling **efficient querying and reporting**.

🏁 **Conclusion**

This project showcases the **end-to-end data pipeline**:

- ✔️ **Data Cleaning** using **SSMS**
- ✔️ **Exploratory Data Analysis (EDA)**
- ✔️ **Power BI Visualization & Insights**

🚀 The analysis helps in understanding **layoff trends, identifying the most impacted industries & countries**, and enabling **data-driven decisions** for **future workforce planning**.