



INTRATECH

PROJECT UNDERSTANDING

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AGENDA

COVID-19 DATA TRACKER ANALYSIS

DEFINE PROJECT OBJECTIVES:

SCOPE:

DATA COLLECTION

DATA PREPROCESSING

AI DATA VISUALIZATION TOOLS

DATA VISUALIZATION AND REPORTING WITH POWER BI

DATA VISUALIZATION AND REPORTING WITH ADVANCE EXCEL

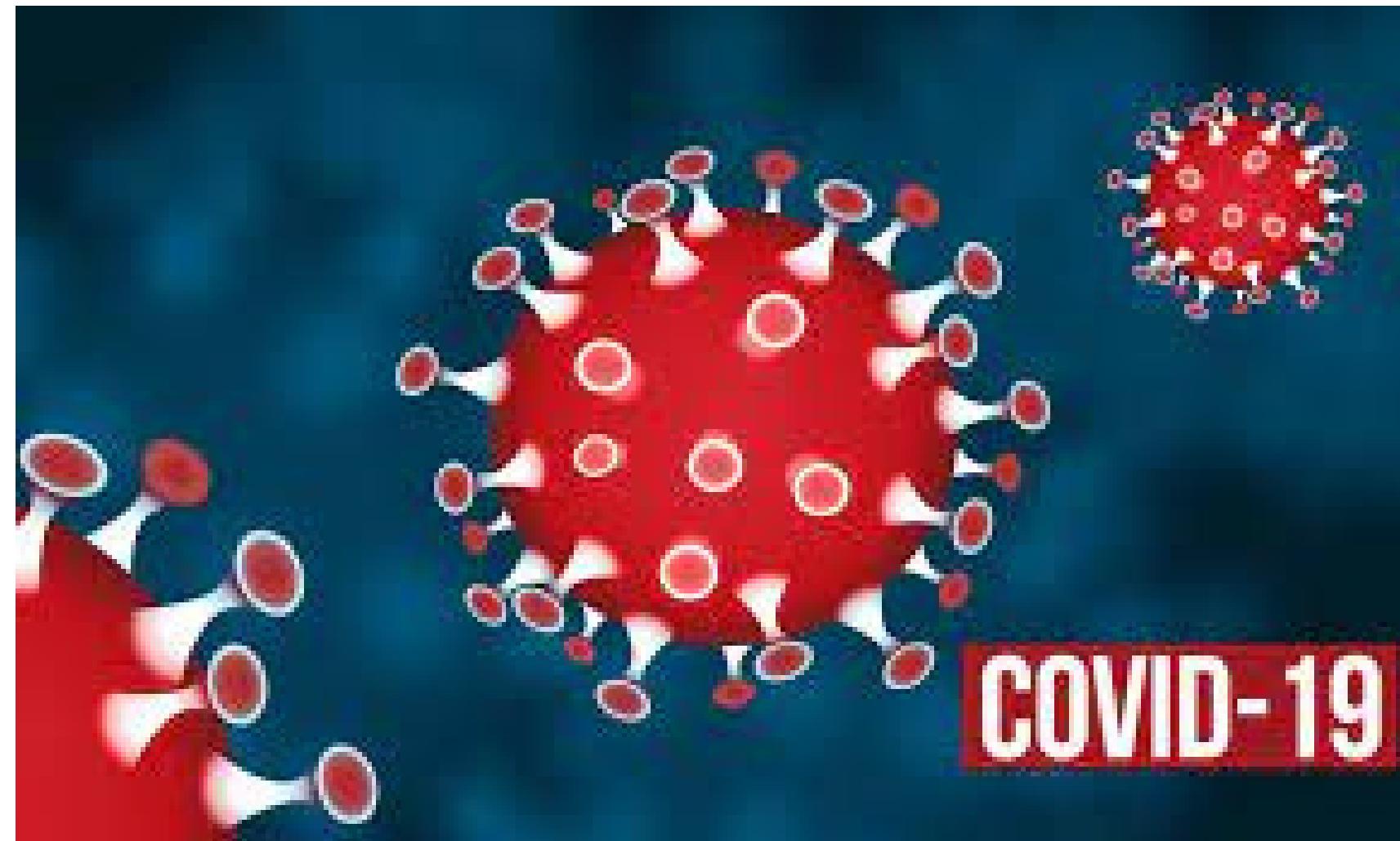
INTERPRET RESULTS

ACTIONABLE RECOMMENDATIONS

REFINEMENT AND ITERATION

COVID-19 DATA TRACKER ANALYSIS

The COVID-19 Data Tracker Analysis Project is a comprehensive effort to provide a reliable and informative tool for tracking and understanding the COVID-19 pandemic's progression. It enables data-driven decision-making and helps stakeholders stay informed about the latest developments. Here are the key steps involved in such a project:



DEFINE PROJECT OBJECTIVES:

The objectives of a COVID-19 Data Tracker analysis are important for monitoring and understanding the progression of the pandemic. The most commonly used objectives for such analysis include:

Monitoring the Spread: Tracking the geographic spread of COVID-19 cases to understand which regions are most affected and how the virus is spreading.

Assessing Impact: Evaluating the impact of the virus on public health, including the number of cases, hospitalizations, and fatalities.

Identifying Trends: Identifying trends over time, such as infection rates, recovery rates, and vaccination coverage, to make informed decisions and predictions.

Resource Allocation: Determining the allocation of resources like ventilators, hospital beds, and medical supplies based on the data to manage the healthcare system effectively.

Public Communication: Providing accurate and up-to-date information to the public, policymakers, and healthcare providers to help guide public health measures and vaccinations.



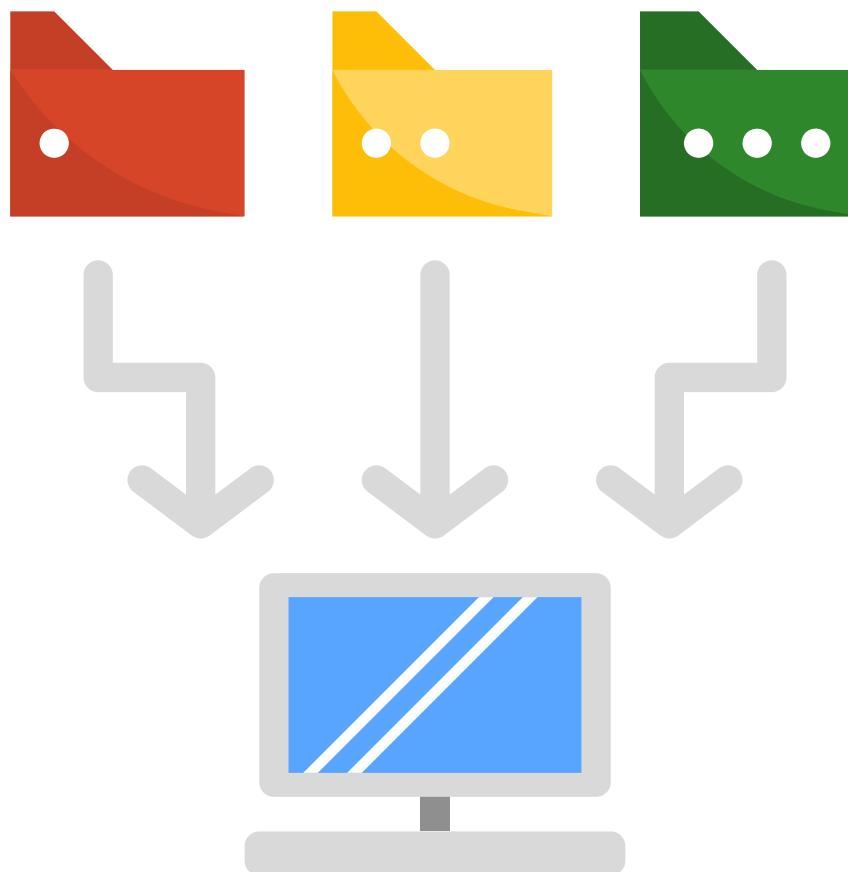
SCOPE:

THE PROJECT INCLUDES DATA COLLECTION FROM RELIABLE SOURCES, DATA CLEANING, DATA TRANSFORMATION, AND THE CREATION OF INTERACTIVE DASHBOARDS TO TRACK COVID-19 METRICS SUCH AS DAILY CASES, DEATHS, RECOVERIES, TESTING, AND VACCINATION RATES.



DATA COLLECTION

WE CAN SOURCE DATA FROM GOVERNMENT HEALTH DEPARTMENTS, INTERNATIONAL ORGANIZATIONS, AND TRUSTED DATA AGGREGATORS. AND MANY MORE



DATA PREPROCESSING

Data preprocessing is an essential step in Power BI to clean, transform, and prepare your data for analysis. Here is a list of common data preprocessing steps in Power BI:

Data Import:

- Connect to your data source (e.g., Excel, CSV, database, web service, or API).
- Load the raw data into Power BI.

Data Profiling:

- Examine the data to understand its structure and quality.
- Identify missing values, duplicates, and outliers.

Data Cleaning:

- Handle missing data by filling in or imputing values as necessary.
- Remove duplicate records.

Data Transformation:

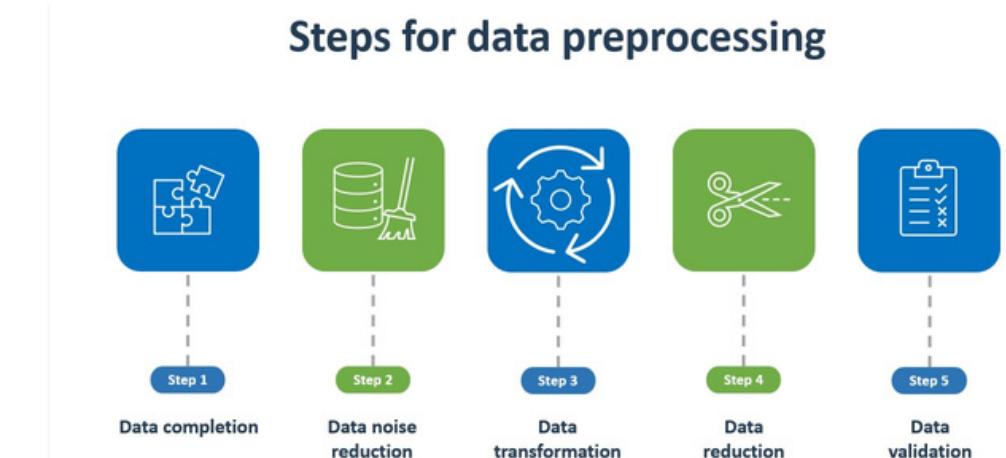
- Use Power Query to perform data transformations.
- Rename columns to make them more meaningful.
- Change data types for columns (e.g., date to date/time).
- Standardize text (e.g., converting text to lowercase).
- Split columns into multiple columns (e.g., splitting a full name into first and last names).
- Merge columns when needed.
- Pivot and unpivot data to reshape it for analysis.
- Apply custom calculations or formulas to create new columns.
- Aggregate data by grouping and summarizing.

Data Enrichment:

- Combine data from different sources through relationships.
- Join or merge tables using common keys.
- Create calculated columns or measures using DAX (Data Analysis Expressions) to enrich your data with calculated values.

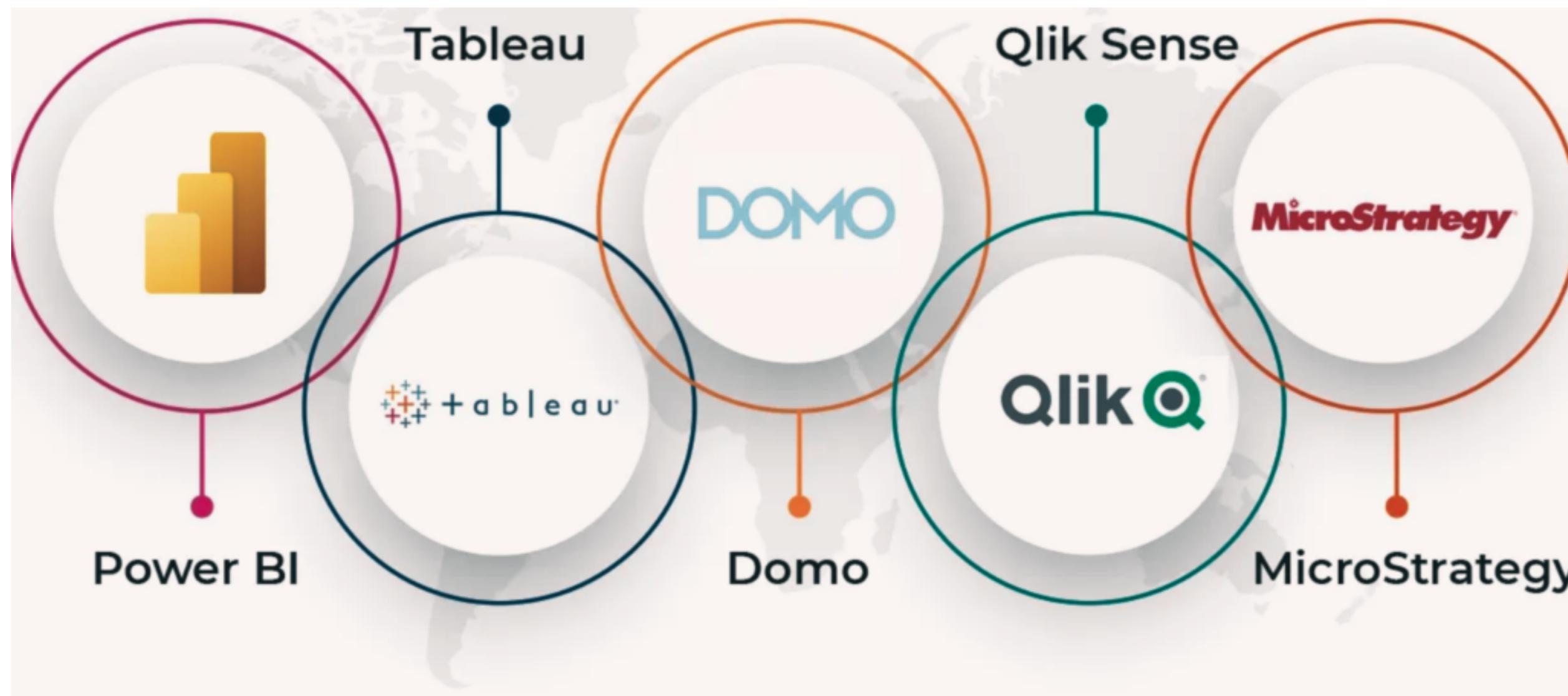
Handling Hierarchical Data:

- Deal with hierarchical data structures using functions like Parent-Child, Path, and Merge Queries.
- Data Sourcing and Integration:
- Create a data model by defining relationships between tables.
- Load your cleaned and transformed data into the Power BI Data Model.



Data Visualization Tools

Data visualization is an essential tool for understanding complex data sets. It allows us to see patterns, trends, and relationships that might not be apparent in raw data.



DATA VISUALIZATION AND REPORTING WITH POWER BI

DATA SOURCES:

CONNECT TO REPUTABLE SOURCES PROVIDING COVID-19 DATA, SUCH AS GOVERNMENT HEALTH AGENCIES, WHO, OR OPEN DATA REPOSITORIES.

DATA MODELING:

CREATE TABLES IN POWER BI TO STORE YOUR COVID-19 DATA, INCLUDING TABLES FOR DAILY CASES, DEATHS, RECOVERIES, AND GEOGRAPHIC DATA.

RELATIONSHIPS:

ESTABLISH RELATIONSHIPS BETWEEN TABLES BASED ON COMMON KEYS LIKE DATES, LOCATIONS, OR COUNTRIES TO ENABLE MEANINGFUL CROSS-FILTERING.

DATA TRANSFORMATION:

USE POWER QUERY TO CLEAN AND TRANSFORM YOUR COVID-19 DATA. THIS MAY INVOLVE AGGREGATING DATA BY DATE OR LOCATION, HANDLING MISSING VALUES, AND CREATING CALCULATED COLUMNS.

DATA VISUALIZATION:

USE VARIOUS VISUALIZATIONS TO PRESENT YOUR COVID-19 DATA EFFECTIVELY. HERE ARE SOME COMMONLY USED VISUALIZATIONS FOR COVID-19 DATA ANALYSIS:

LINE CHARTS: FOR TRACKING DAILY CASES, DEATHS, AND RECOVERIES OVER TIME.

MAPS: TO SHOW THE GEOGRAPHIC DISTRIBUTION OF CASES, DEATHS, AND RECOVERIES.

TABLES AND MATRICES: FOR DISPLAYING DETAILED DATA, INCLUDING DAILY STATISTICS BY REGION.

AREA CHARTS: TO VISUALIZE CUMULATIVE CASES AND RECOVERIES OVER TIME.

DAX EXPRESSIONS:

CREATE DAX MEASURES TO CALCULATE VARIOUS METRICS AND KPIs RELATED TO COVID-19 DATA. EXAMPLES OF DAX EXPRESSIONS INCLUDE:

TOTAL CASES: SUM('COVID-19 DATA'[CASES])

DAILY NEW CASES: [TOTAL CASES] - CALCULATE([TOTAL CASES], PREVIOUSMONTH('DATE'[DATE]))

MORTALITY RATE: DIVIDE([TOTAL DEATHS], [TOTAL CASES])

GROWTH RATE: DIVIDE([TOTAL CASES], CALCULATE([TOTAL CASES], PREVIOUSMONTH('DATE'[DATE])))

Slicers and Filters:

CREATE SLICERS AND FILTERS TO ALLOW USERS TO INTERACT WITH THE DATA. USERS CAN FILTER DATA BY DATE, REGION, OR COUNTRY.

Report Pages:

ORGANIZE YOUR VISUALIZATIONS INTO MULTIPLE REPORT PAGES. EACH PAGE CAN FOCUS ON DIFFERENT ASPECTS OF YOUR COVID-19 DATA ANALYSIS, SUCH AS GLOBAL TRENDS, REGIONAL BREAKDOWNS, OR VACCINATION PROGRESS.

Custom Visuals (Optional):

CONSIDER USING CUSTOM VISUALS FROM THE POWER BI MARKETPLACE TO ENHANCE YOUR DATA PRESENTATION. FOR EXAMPLE, YOU CAN USE CUSTOM MAPS WITH DRILL-DOWN CAPABILITIES.

Publish and Share:

PUBLISH YOUR POWER BI REPORT TO THE POWER BI SERVICE OR EXPORT IT AS A PDF OR POWERPOINT PRESENTATION TO SHARE WITH STAKEHOLDERS AND THE PUBLIC.

Scheduled Refresh:

SET UP A SCHEDULED DATA REFRESH TO KEEP YOUR COVID-19 DATA TRACKER REPORT UP-TO-DATE WITH THE LATEST INFORMATION.



Total Sales
8.92bn

Europe
2.43bn

Japan
1.29bn

North America
4.39bn

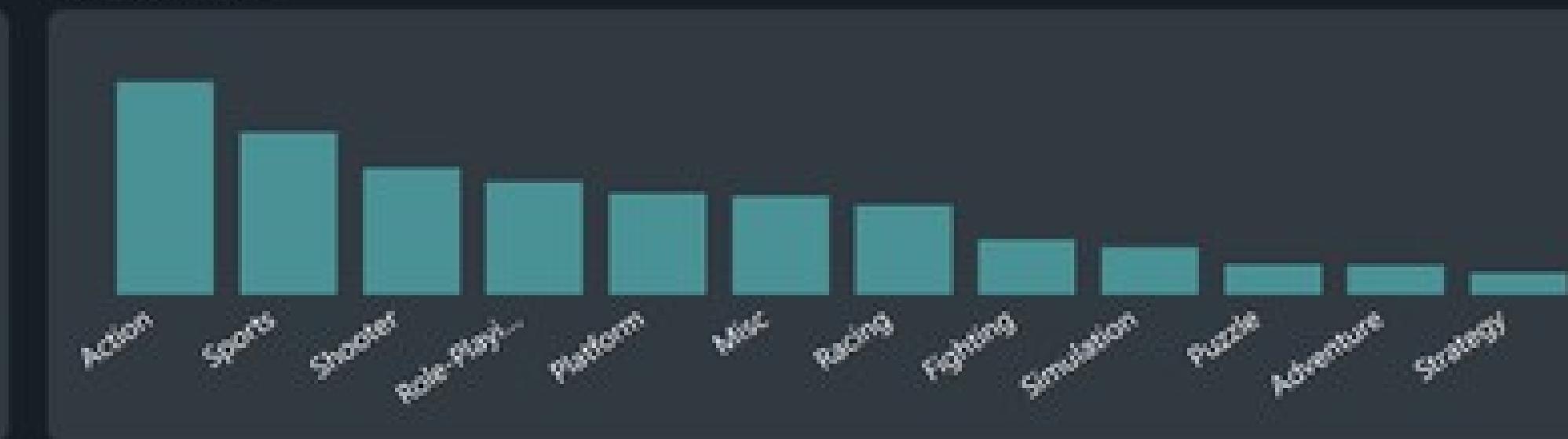
Others
797.75M



Sales by Region



Sales by Genre



PS2

Most selling platforms



Most selling publishers



Wii

DATA VISUALIZATION AND REPORTING WITH ADVANCED EXCEL

Creating meaningful visualizations and reports to present sentiment analysis results in Excel involves combining sentiment analysis data with various charts and tables to convey the information effectively. Here's a step-by-step guide on how to do this:

Import the Data:

Import the COVID-19 Data Tracker analysis results into Excel. Make sure your dataset has relevant information.

Data Transformation:

4. Data Cleaning: Clean and format the data as needed, including handling missing values and ensuring data consistency.

Data Modeling: 2. Data Tables: Create tables to store COVID-19 data, including tables for daily cases, deaths, recoveries, and regional breakdowns.

Relationships: 3. Relationships: Establish relationships between data tables, allowing you to perform complex data analysis.

Data Visualization: 5. Visualizations: Use various Excel charts and objects to visualize COVID-19 data. Commonly used visuals include:

Line Charts: For tracking daily cases, deaths, or recoveries over time.

Bar Charts: For comparing data across different regions or time periods.

Maps: To display regional data using Excel's built-in geographic mapping features.

Data Bars and Color Scales: For heat maps to highlight high or low data points.

Slicers and Timelines: To allow users to filter data by date, region, or other parameters.

SUMIFS

THE TOP 5 FORMULAS COMMONLY USED IN SUCH PROJECTS:

SUMIFS: This function allows you to sum values based on multiple criteria. For example, you can sum the number of cases or deaths for a specific date and region.

AVERAGE :AVERAGE: Calculate the average value of a range of data. For instance, you can find the average daily cases over a period.

IF: This function allows you to apply conditional logic. For example, you can use it to display "Increased" if the number of cases is higher today than yesterday or "Decreased" if it's lower..

VLOOKUP: Retrieve data from a different table or range. For instance, you can use it to look up population data for a specific region.

Data Security:

13. Data Protection: Ensure that sensitive data is properly secured, and access controls are in place, especially if dealing with patient data.

Documentation and User Guide:

14. Documentation: Create a user guide or documentation to explain how to use and interpret the COVID-19 data tracker.

Scheduled Data Updates:

15. Automated Data Refresh: Set up a system to automatically update and refresh your COVID-19 data at regular intervals.

INTERPRET RESULTS

Analyze the visualized data to draw insights and conclusions. What patterns or trends do you observe in the COVID-19 data tracker analysis? How do these insights align with your project objectives?

ACTIONABLE RECOMMENDATIONS

Based on your findings, provide actionable recommendations for businesses or organizations. What can they do to improve their reputation or address concerns?

THANK YOU