

SQL Data Exploration

Tool : BigQuery - Google Cloud

Dataset : <https://ourworldindata.org/coronavirus>

// KPIs

```
SELECT MAX(total_cases) AS TotalCases,
       MAX(total_deaths) AS TotalDeaths,
       MAX(total_vaccinations) AS TotalVaccinations,
       (MAX(total_deaths)/MAX(total_cases))*100 AS DeathRate,
FROM `sql-data-analysis-project.CovidData.owid-covid-data`
```

// Death percentage by Country

```
SELECT location AS Country,
       MAX(total_cases) AS TotalCases,
       MAX(total_deaths) AS TotalDeaths,
       MAX(new_cases) AS DailyCases,
       (MAX(total_deaths)/MAX(total_cases))*100 AS DeathRate
FROM `sql-data-analysis-project.CovidData.owid-covid-data`
WHERE continent IS NOT NULL
GROUP BY Country
ORDER BY 2 DESC
```

// Country-wise infection Rate

```
SELECT location as Country,
       MAX(population) AS Population,
       MAX(total_cases) AS TotalCases,
       (MAX(total_cases)/MAX(population))*100 AS infectionRate
FROM `sql-data-analysis-project.CovidData.owid-covid-data`
GROUP BY Country
ORDER BY 1,2
```

// Daily cases and deaths in specific country

```
SELECT EXTRACT(YEAR FROM date) AS Year,
       FORMAT_DATE('%B', date) AS MonthName,
       location AS Country,
       MAX(new_cases) AS DailyCases,
       MAX(new_deaths) AS DailyDeaths
FROM `sql-data-analysis-project.CovidData.owid-covid-data`
WHERE location like 'Ind%'
Group BY Year,MonthName,location
ORDER BY 1 DESC
```

//Vaccinations summary

```
SELECT location AS Country,
       MAX(total_vaccinations) AS TotalVaccination,
       (MAX(people_vaccinated)/MAX(total_vaccinations))*100 AS
oneDoseComplete,
       (MAX(people_fully_vaccinated)/MAX(total_vaccinations))*100 AS
fullyVaccinated
FROM `sql-data-analysis-project.CovidData.owid-covid-data`
Where continent IS NOT NULL
GROUP BY Country
ORDER BY 1
```

// Tests count vs positive rate

```
SELECT location,
       AVG(total_tests) AS TotalsTests,
       AVG(positive_rate)*100 AS positiveRate
FROM `sql-data-analysis-project.CovidData.owid-covid-data`
WHERE continent IS NOT NULL AND tests_units IS NOT NULL
GROUP BY location
ORDER BY positiveRate DESC
```

//The stringency index includes school closures, workplace closures, and travel bans, ranging from 0 to 100 (100 = strictest).

```
SELECT location AS Country,  
       FORMAT_DATE('%B', date) AS MonthName,  
       MAX(stringency_index) AS stringencyIndex  
FROM `sql-data-analysis-project.CovidData.owid-covid-data`  
WHERE continent IS NOT NULL  
GROUP BY location,MonthName
```

//The reproduction rate represents the average number of new infections caused by a single infected individual. If rate is greater than 1 infection can spread in population, if below 1 no. of cases gradually decrease to 0

```
SELECT location AS Country,  
       MAX(reproduction_rate) AS ReproductionRate,  
       MAX(stringency_index) AS stringencyIndex  
FROM `sql-data-analysis-project.CovidData.owid-covid-data`  
WHERE continent IS NOT NULL  
GROUP BY location  
ORDER BY 2 DESC
```