COVID-19 Data Analysis
Exploring Global Trends, Regional Disparities, and Weekly Insights

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INTRODUCTION

Objective: To analyze global COVID-19 data to uncover trends and disparities.

Dataset Overview:
15 columns (e.g., confirmed, deaths, recovered, 1_week_change).Focused on country and regional statistics.

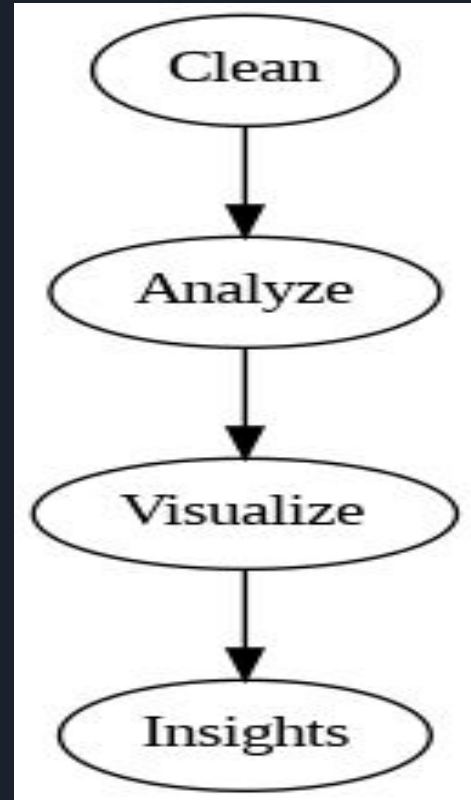|	A	B	C	D	E	
1	Country/Region	Confirmed	Deaths	Recovered	Active	New
2	Afghanistan	36263	1269	25198	9796	
3	Albania	4880	144	2745	1991	
4	Algeria	27973	1163	18837	7973	
5	Andorra	907	52	803	52	
6	Angola	950	41	242	667	
7	Antigua and Barl	86	3	65	18	
8	Argentina	167416	3059	72575	91782	
9	Armenia	37390	711	26665	10014	
10	Australia	15303	167	9311	5825	
11	Austria	20558	713	18246	1599	
12	Azerbaijan	30446	423	23242	6781	
13	Bahamas	382	11	91	280	
14	Bahrain	39482	141	36110	3231	
15	Bangladesh	226225	2965	125683	97577	
16	Barbados	110	7	94	9	
17	Belarus	67251	538	60492	6221	
18	Belgium	66428	9822	17452	39154	
19	Belize	48	2	26	20	
20	Benin	1770	35	1036	699	
21	Bhutan	99	0	86	13	

METHODOLOGY

Steps Taken:

Data cleaning: Handled missing values and standardized column names.

Exploratory Data Analysis: Univariate, correlation, and group analyses.

Visualizations: Used bar plots, scatter plots, and heatmaps.
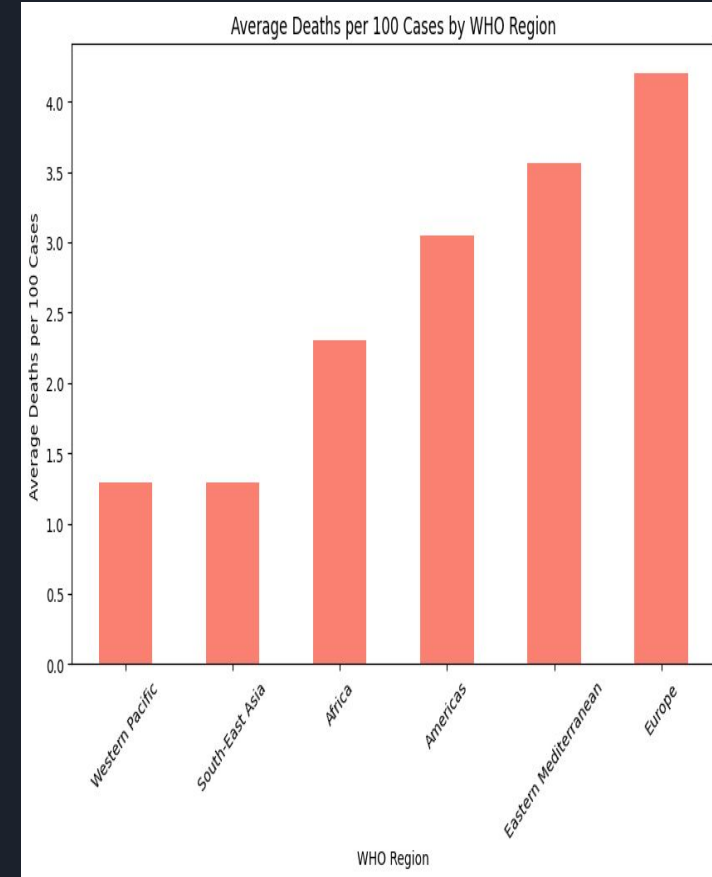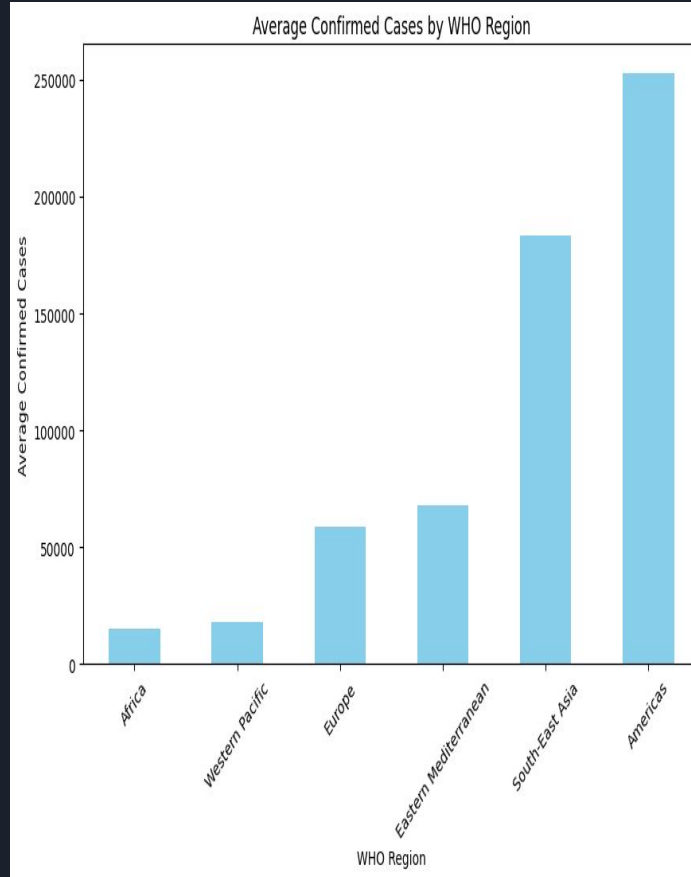
GLOBAL TREND PART 1

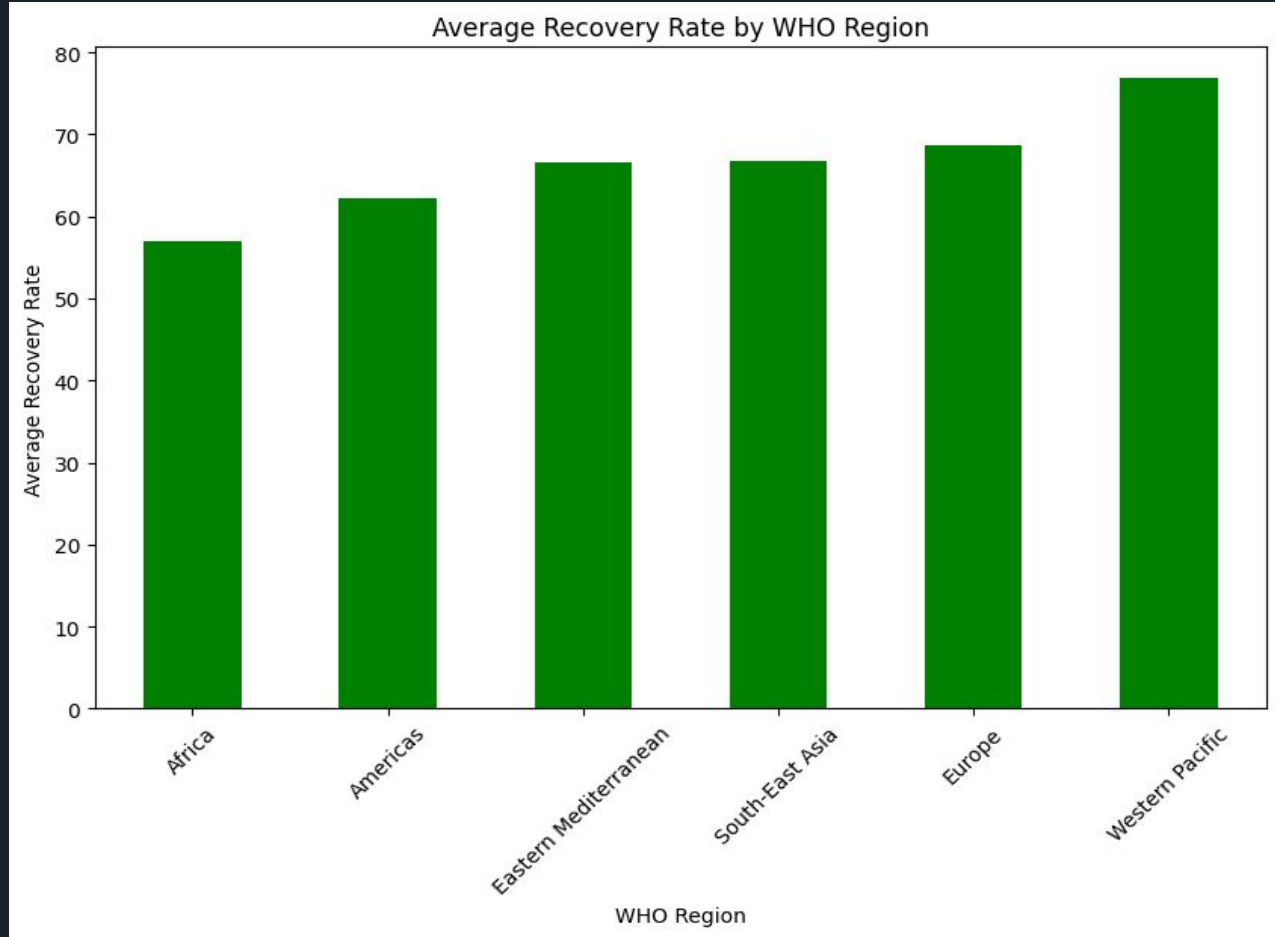The Americas lead in confirmed cases globally.

Europe has the highest death rate per 100 cases.

South-East Asia demonstrates the highest recovery rates.

Average Confirmed Cases by WHO Region

Average Deaths per 100 Cases by WHO Region

GLOBAL TREND PART 2

Recovery rates by region highlight disparities in healthcare effectiveness.

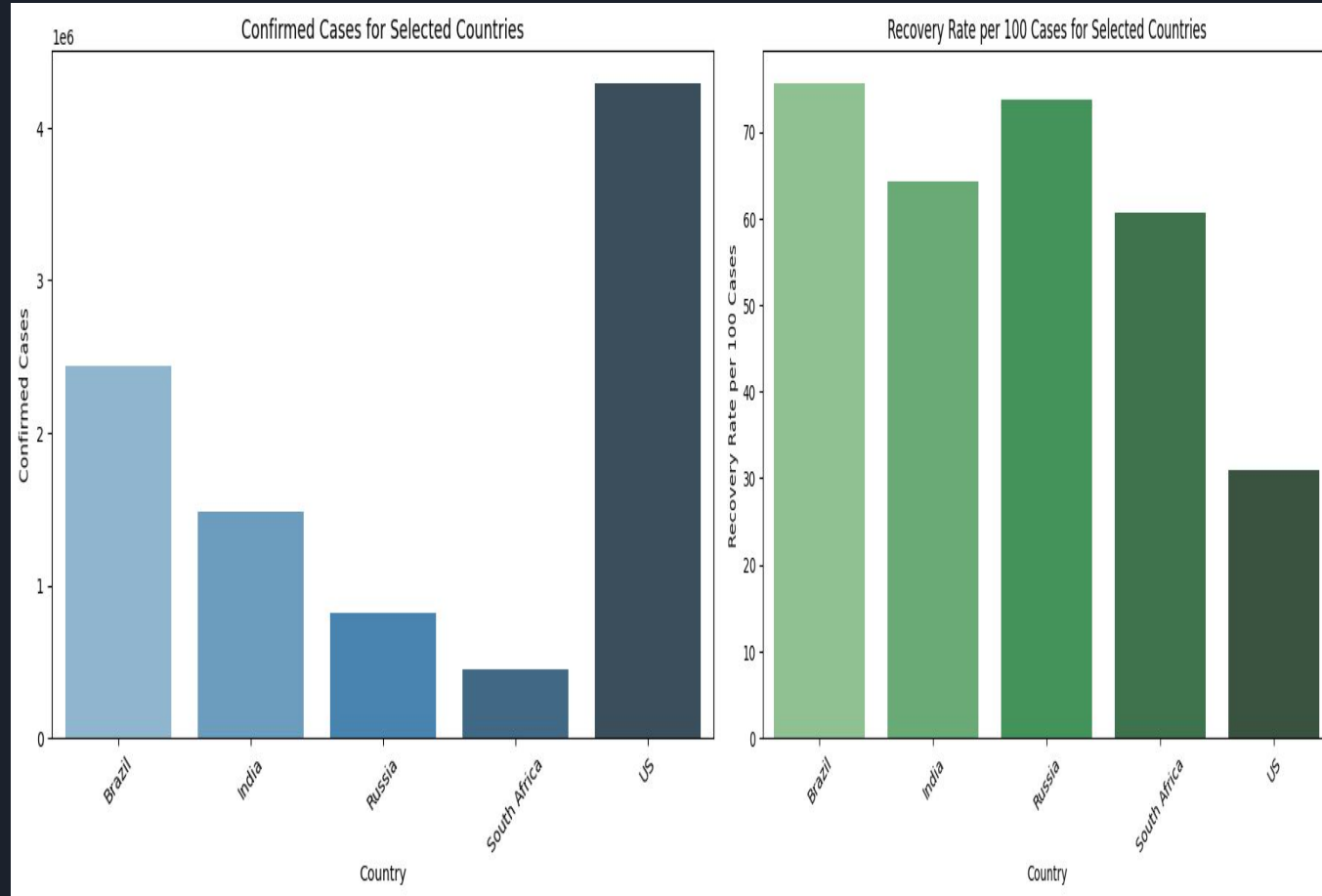Average Recovery Rate by WHO Region

CONTRY-LEVEL INSIGHT PART 1

Top 5 countries for confirmed cases:

United States, India, and Brazil account for the majority of global cases.
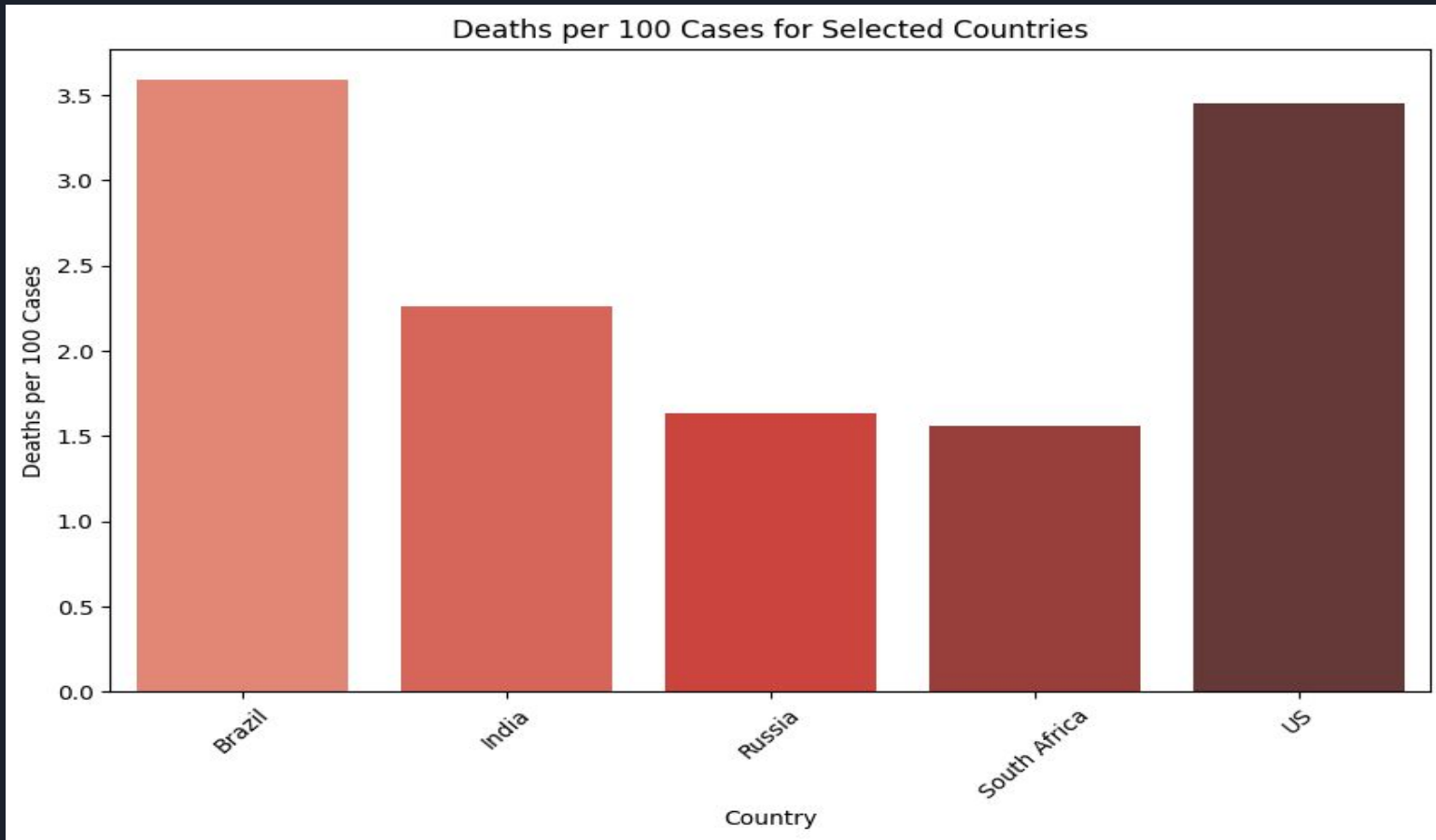
Countries with exceptional recovery rates:

Russia and Brazil lead due to advanced healthcare systems.

COUNTRY-LEVEL INSIGHT PART 2

Countries with the highest deaths per 100 cases:

Brazil and US faced significant challenges due to high level of confirmed cases.

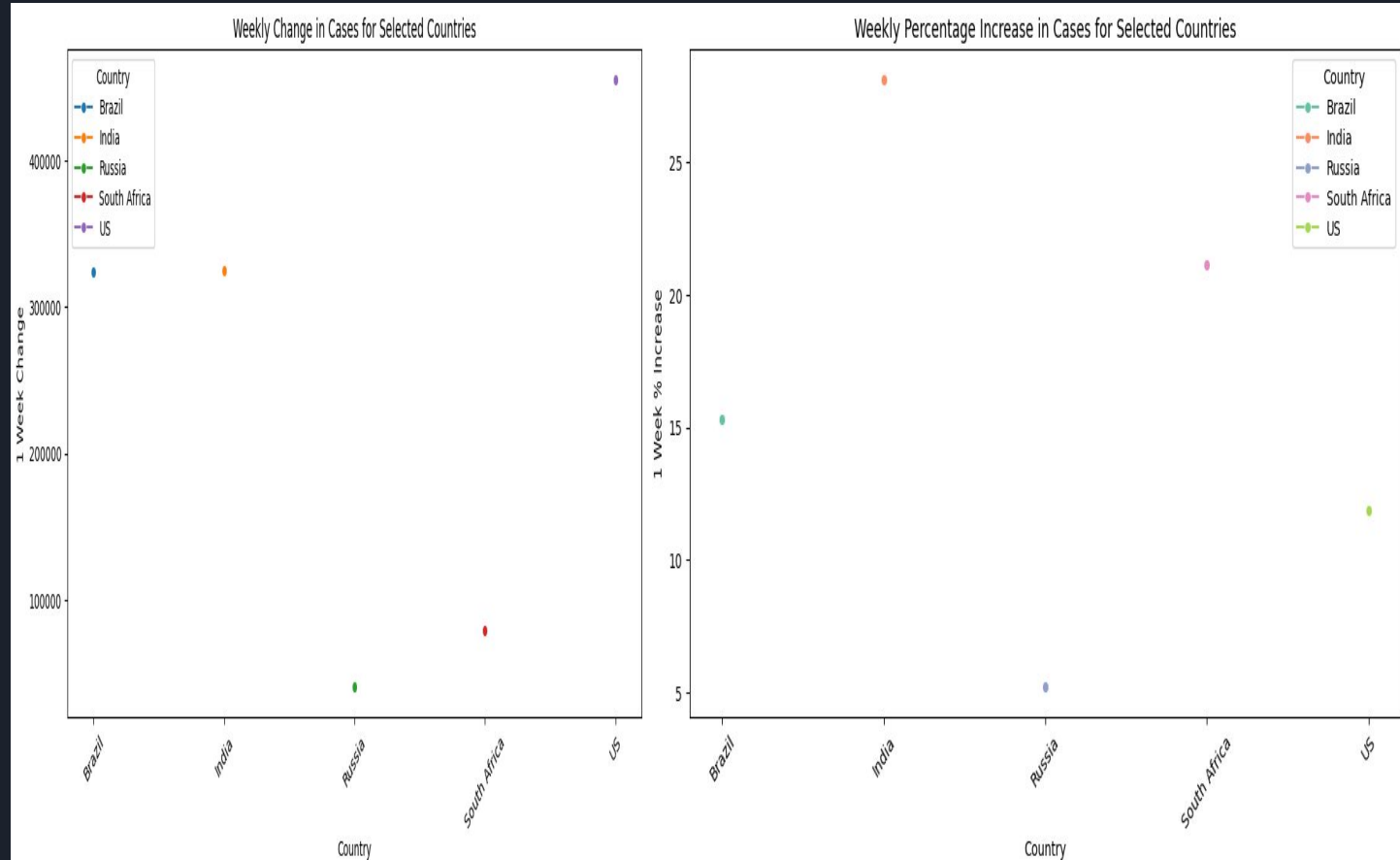Deaths per 100 Cases for Selected Countries

WEEKLY TRENDS

Countries with the largest weekly increases:

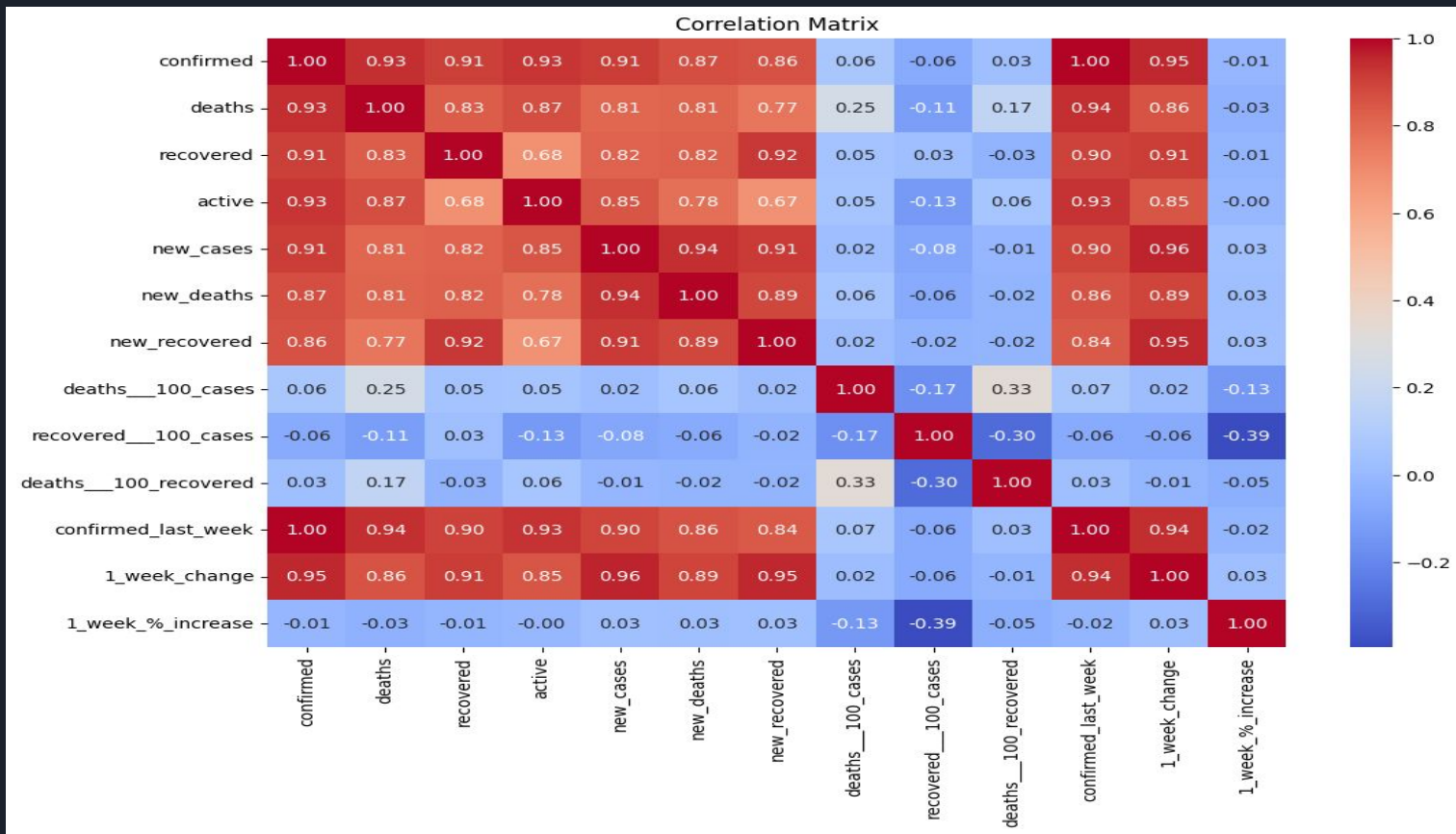India and Brazil saw significant weekly surges.

Smaller countries like Bahamas experienced sharp percentage increases.

CORRELATION

Confirmed cases strongly correlate with deaths (r > 0.8).

Recovery rates negatively correlate with deaths per 100 cases.

CONCLUSION AND RECOMMENDATIONS

Key Takeaways:

Americas have the highest confirmed cases, Europe the highest death rates.

South-East Asia demonstrates effective pandemic management.

Recommendations:

Strengthen healthcare systems in regions with high death rates.

Increase testing in under-reported regions.

Encourage regional collaboration to share effective strategies.

Thank you