



The effect of the corona vaccine on the number of deaths

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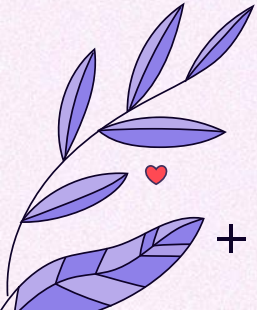
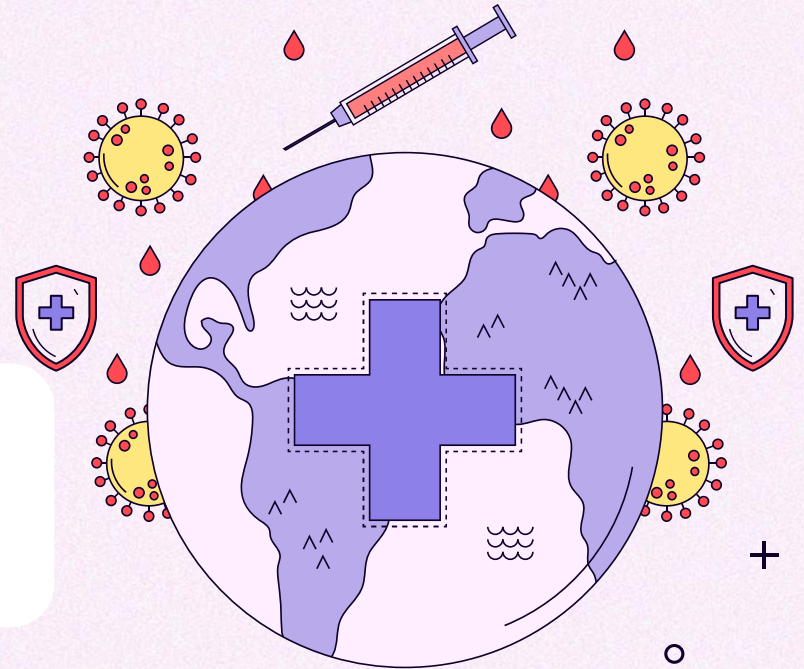


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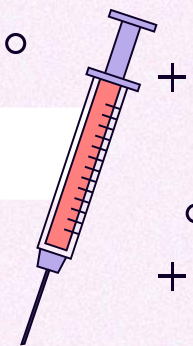
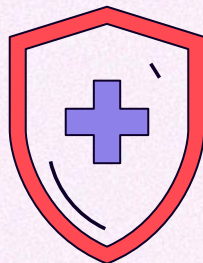
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Introduction

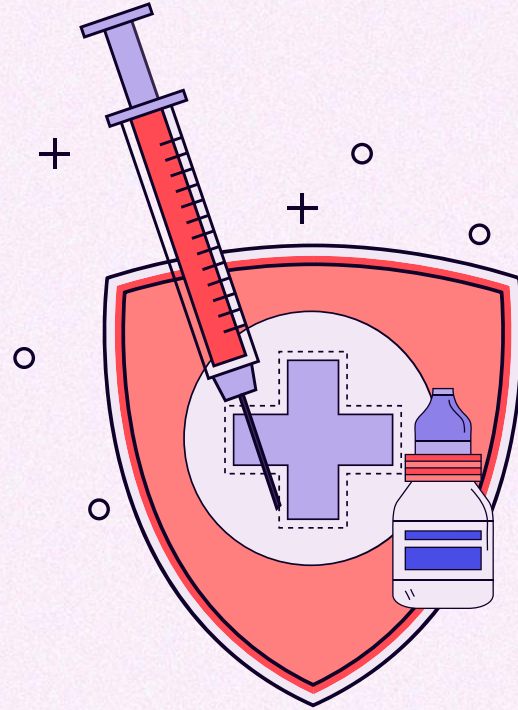
The COVID-19 pandemic has brought the whole world to a halt, nearly 4.5 million people have perished, and the only way out of the crisis is for everyone to be vaccinated. .



01

OBJECTIVES

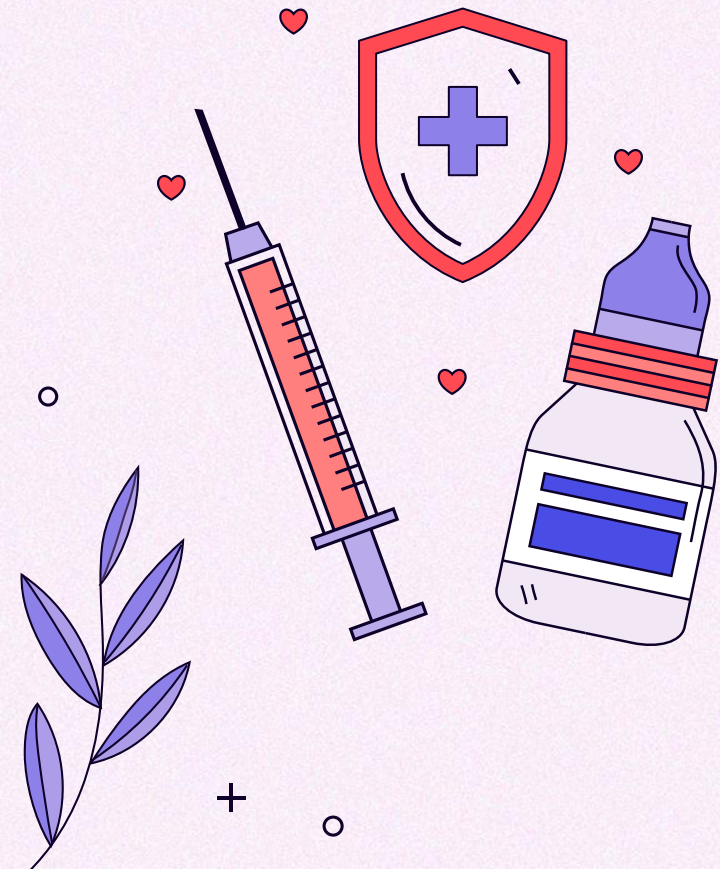
-What is the relationship between death rate and have received vaccinations?



Dataset

20,332 records

10 features



Dataset

```
1 # Check result
2 covid_df.head()
```

Unnamed: 0	country	iso_code	date	total_vaccinations	people_vaccinated	people_fully_vaccinated	New_deaths	population	ratio	
0	0	Afghanistan	AFG	5/11/2021	504502	448878	55624	12	40094444	1.119552
1	1	Afghanistan	AFG	5/20/2021	547901	470341	77560	10	40094444	1.173083
2	2	Afghanistan	AFG	5/24/2021	573277	476367	96910	10	40094444	1.188112
3	3	Afghanistan	AFG	5/26/2021	590454	479372	111082	19	40094444	1.195607
4	4	Afghanistan	AFG	5/27/2021	593313	479574	113739	14	40094444	1.196111

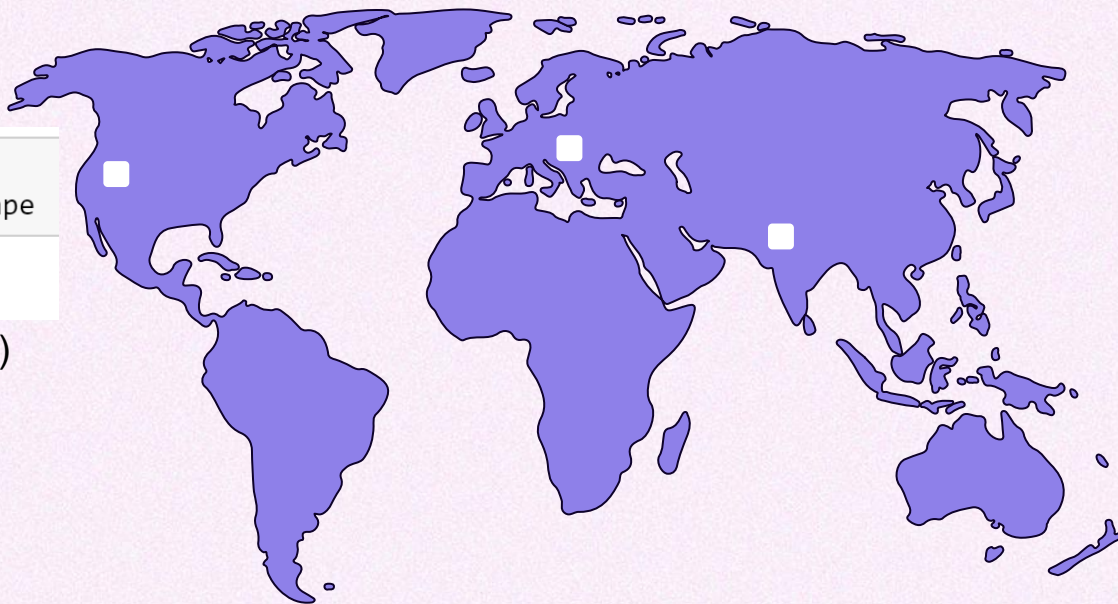
EXPLORATORY DATA ANALYSIS (EDA)

```
1 #number of countries
2 covid_df['country'].unique().shape
```

(198,)

- From (27-12-2020) to (9-10-2021)

- 7677597359 population



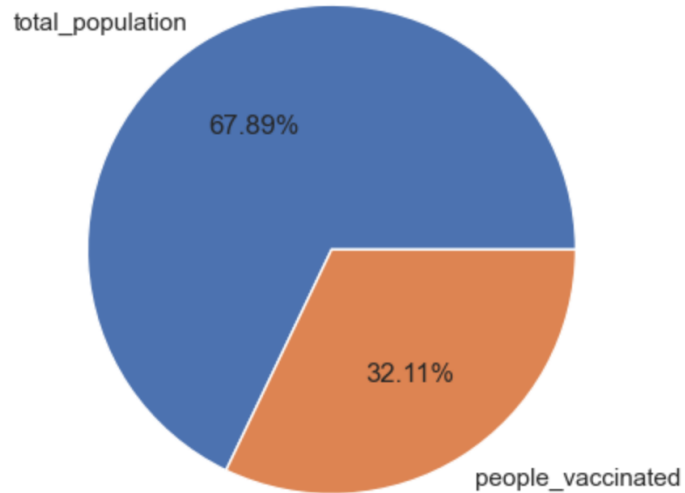
```
1 # get the number of missing data points per column
2 missing_values_count = covid_df.isnull().sum()
3 # Look at the # of missing points in the first ten columns
4 missing_values_count[0:10]
```

```
country          0
iso_code         0
date             0
total_vaccinations  0
people_vaccinated  0
people_fully_vaccinated  0
New_deaths       0
population       0
ratio            0
dtype: int64
```

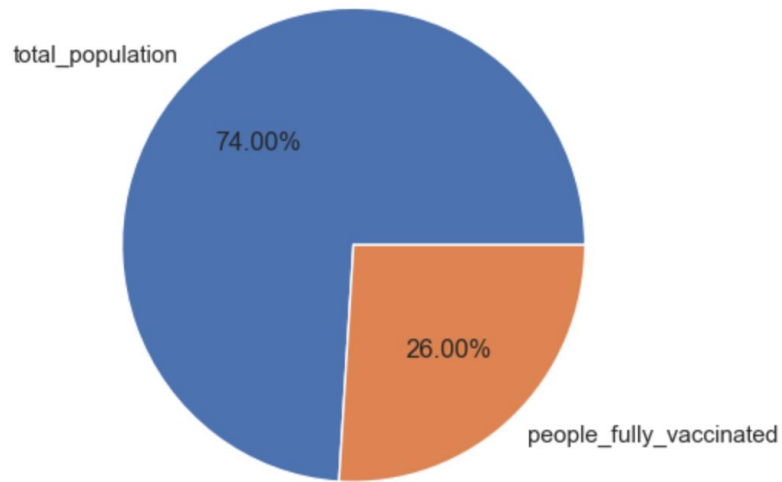
```
1 #delete unnamed column
2 covid_df.drop('Unnamed: 0', axis=1, inplace=True)
3 covid_df.columns
4 for col in covid_df.columns:
5     if col.startswith('Unnamed'):
6         del df[col]
7 covid_df.head()
```


Total Vaccination

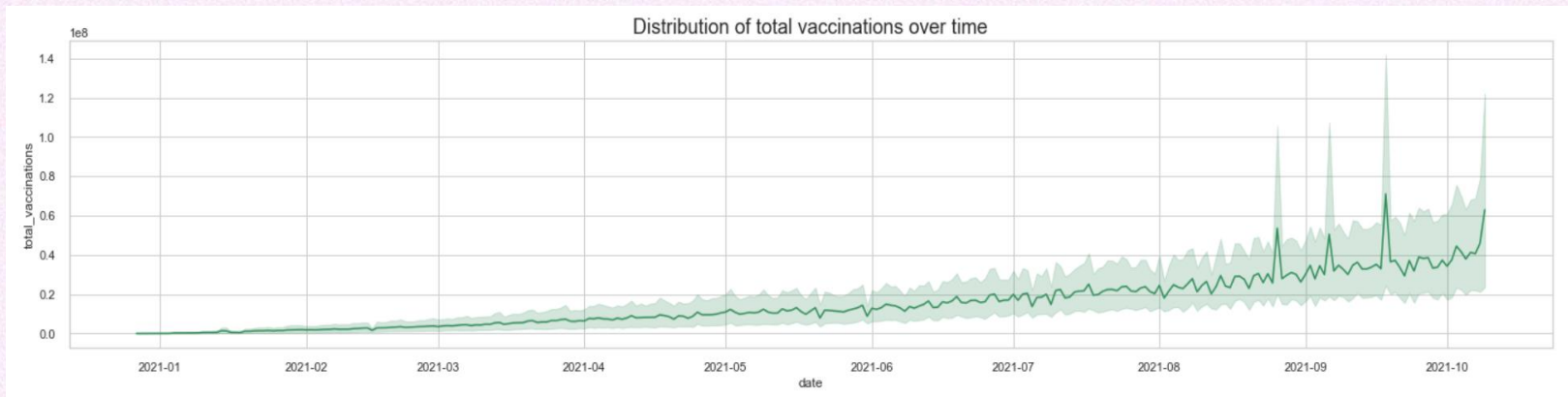
Ratio of people vaccinated(at least one shot)



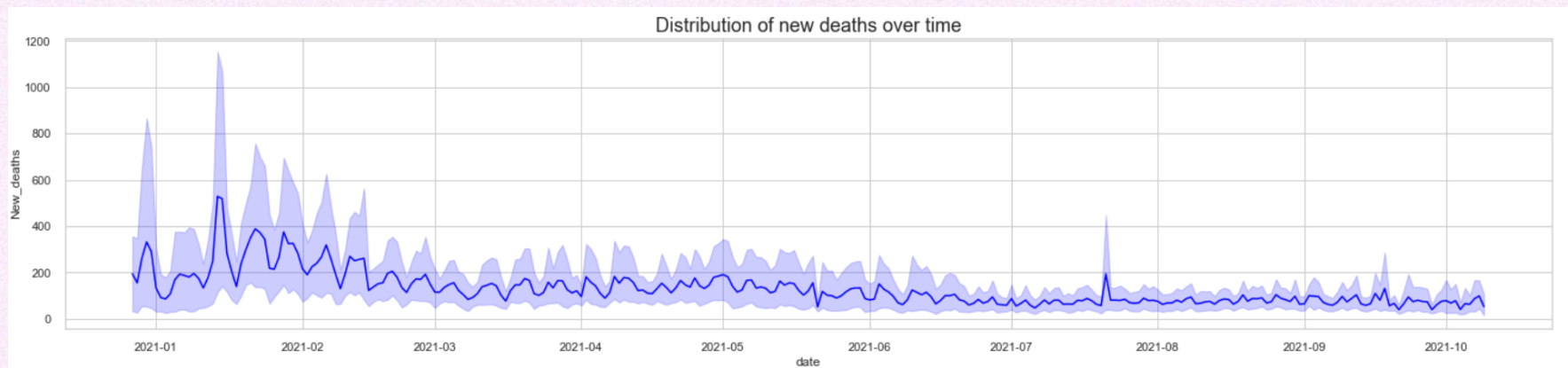
Ratio of people fully vaccinated



Total Vaccination



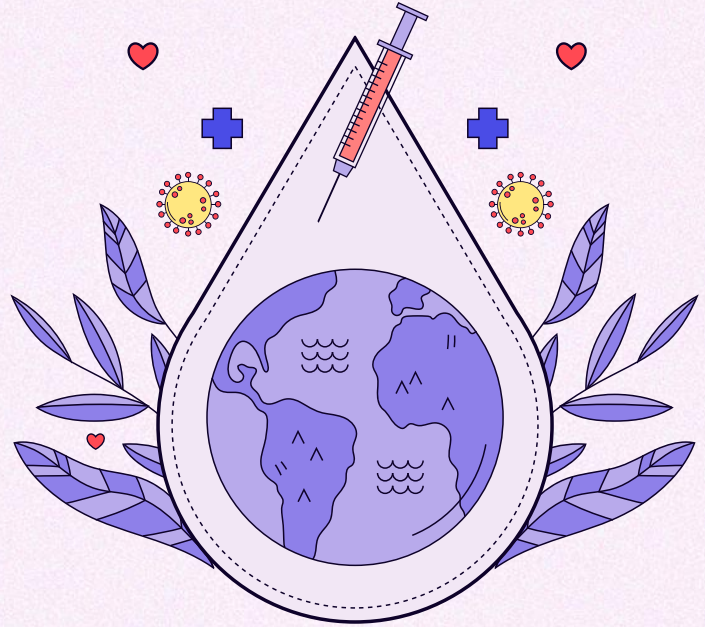
New deaths over time



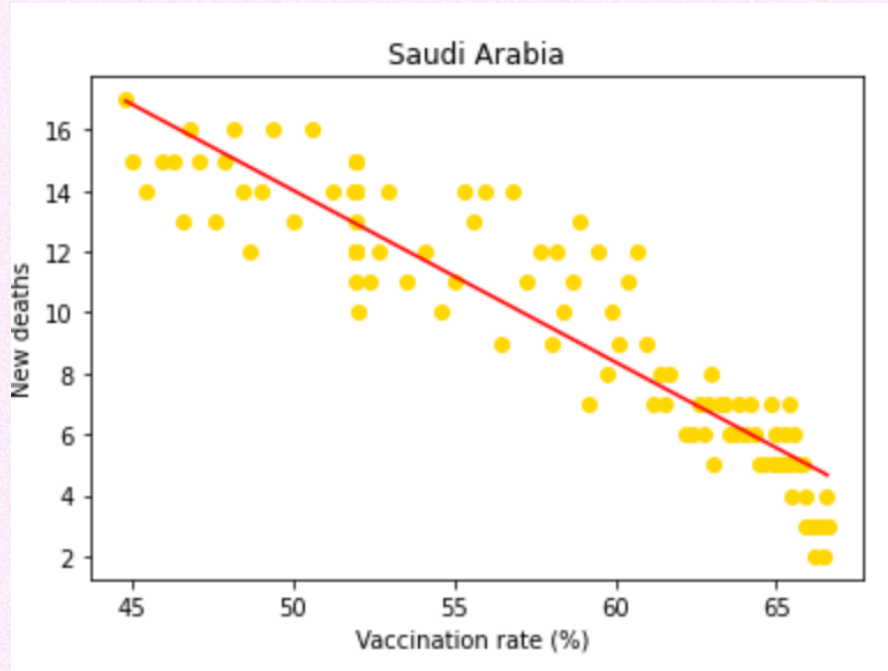
02

METHODOLOGY

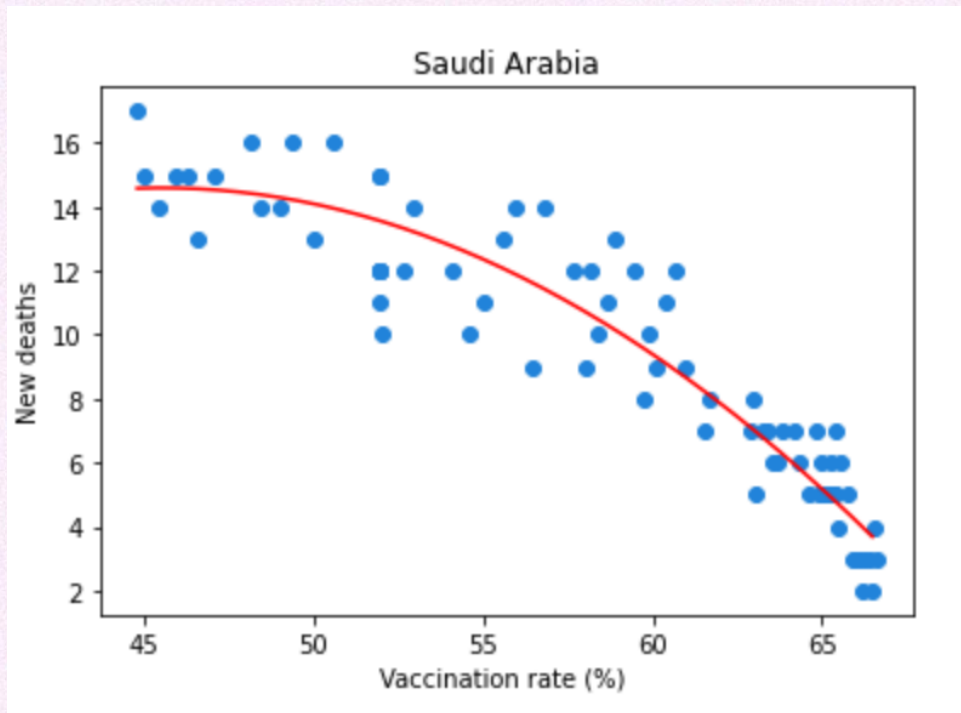
- Linear Regression
- Polynomial Regression



Linear Regression



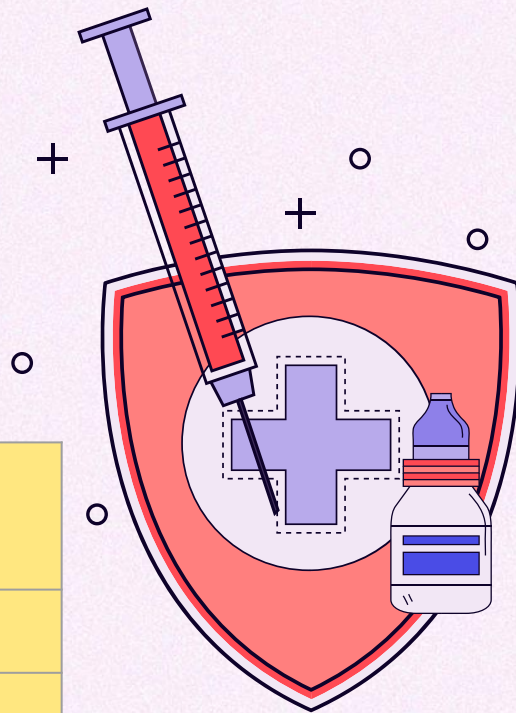
Polynomial Regression



03

RESULT

	Linear Regression	Polynomial Regression
MAE	1.28	1.16
MSE	2.45	2
R2	0.85	0.88

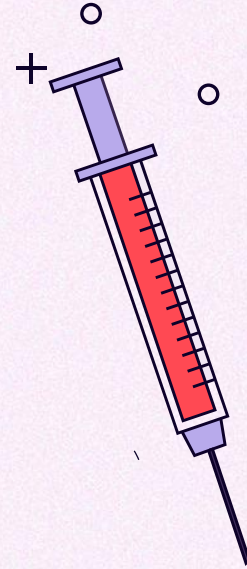


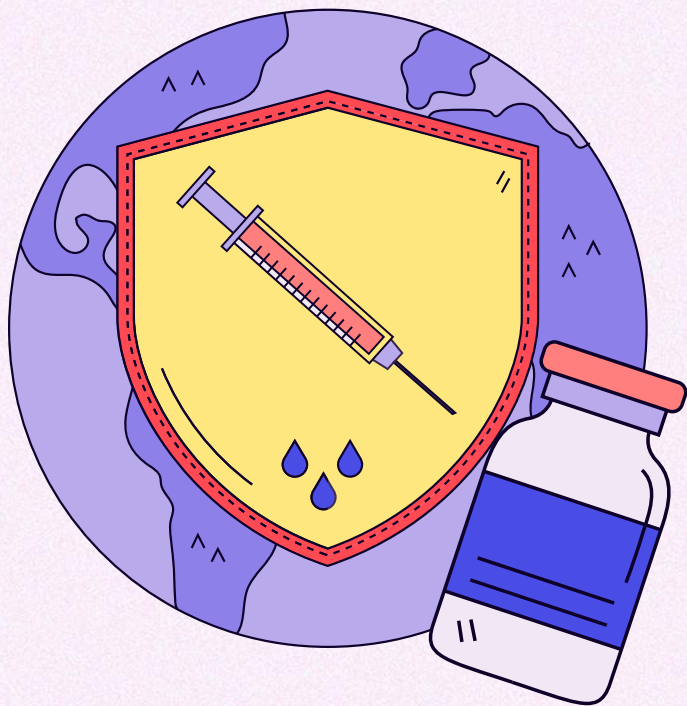
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CONCLUSIONS

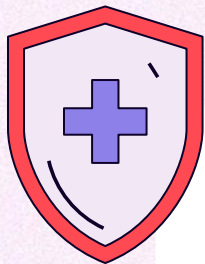
The purpose of this data collection and attempting this project was to examine the effect of coronavirus immunizations on coronavirus mortality.

For future work, work in different countries and applying different models.





THANKS



AWESOME WORDS

