MINISTRY OF SKILL DEVELOPMENT
AND ENTREPRENEURSHIP

NATIONAL SKILL TRAINING INSTITUTE

TRIVANDRUM

Project on Use of Microsoft Excel in COVID-19 World Vaccination Progress

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ACKNOWLEDGEMENT

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Topics

1. Introduction

As the COVID-19 pandemic continues to impact communities worldwide, several vaccines have been authorized for emergency use in various countries, with many more in the final stage of clinical trials. The successful deployment of a COVID-19 vaccine has the potential to eradicate the global corona virus pandemic, but the task is challenging. COVAX, co-led by Gavi, the Coalition for Epidemic Preparedness Innovations, and the World Health Organization (WHO), was established to accelerate the development and manufacture of COVID-19 vaccines and to guarantee fair and equitable access for every country.

2. Technology used

Microsoft Excel 2010 version is used on windows 10.

3. Feasibility Study

Microsoft Excel is a spreadsheet, developed by Microsoft for Windows, macOS, Android and iOS. Microsoft Excel is a spreadsheet program that is used to record and analyse numerical data. Think of a spreadsheet as a collection of columns and row that form a table.

Microsoft Excel is one of the top tools for data analysis and the built-in pivot tables are arguably the most popular analytic tool. ... To complement, pivot charts and slicers can be used together to visualize data and create easy to use dashboards.

Benefits

- Best way to store data
- All the tools for data analysis
- Easy to data visualizations with charts
- Transform and clean data
- Store data with millions of rows

4. Aims and objectives

The availability of a safe and effective vaccine for COVID-19 is well-recognized as an additional tool to contribute to the control of the pandemic. At the same time, the challenges and efforts needed to rapidly develop, evaluate and produce this at scale are enormous. It is vital that we evaluate as many vaccines as possible as we cannot predict how many will turn out to be viable.

To increase the chances of success (given the high level of attrition during vaccine development), we must test all candidate vaccines until they fail. WHO is working to ensure that all of them have the chance of being tested at the initial stage of development.

This is a major and extraordinary global research undertaking: WHO is facilitating collaboration and accelerated efforts on a scale not seen before; it is convening vital communications across the research community and beyond.

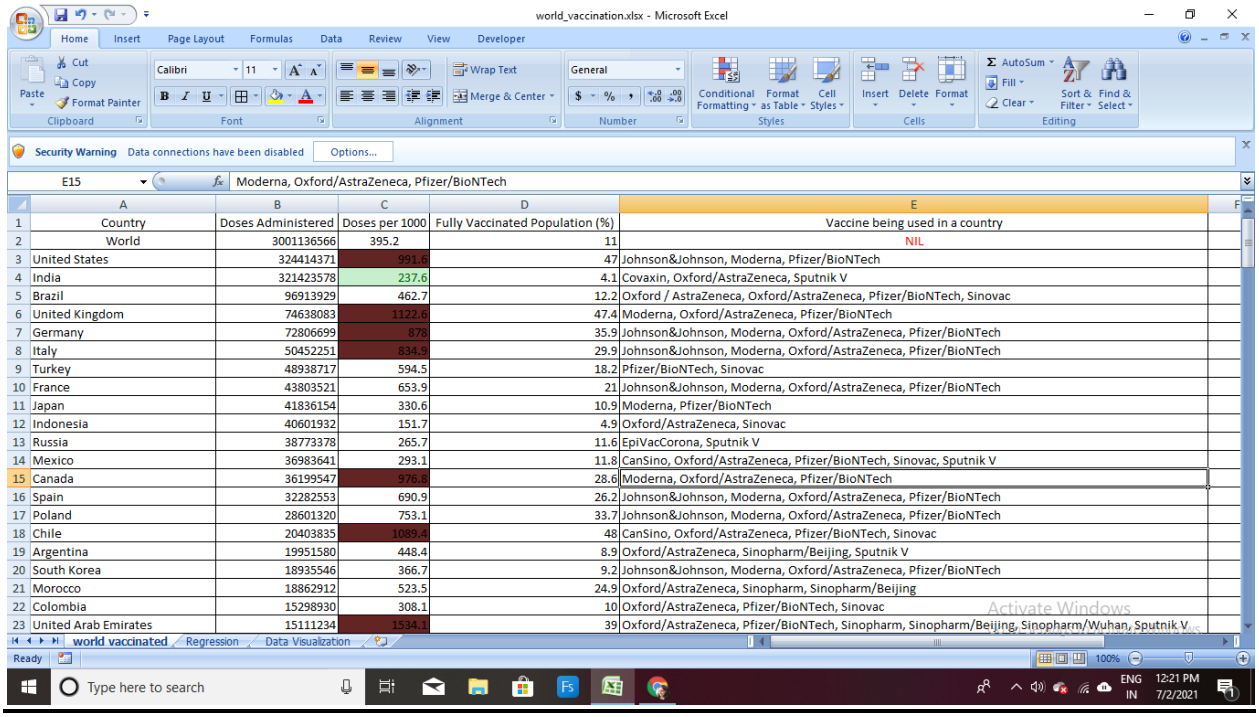
5. Challenges

The Coalition for Epidemic Preparedness Innovations has begun to develop a number of COVID-19 vaccine platform technologies. An ideal platform would accelerate development efforts from viral sequencing to clinical testing in less than 16 weeks, show a consistent immune response among pathogens, and be suitable for large-scale production by using a pathogen-agnostic platform. Unfortunately, even with a new platform technology, vaccine development is still hampered by several challenges. Although the S protein of the virus is known to be a promising immunogen, the optimization of the antigen design is still debated. Previous preclinical testing of SARS and MERS vaccine candidates showed lung disease susceptibility.

6. Output

Segregation

Division of **data** into various categories for purposes of dividing or restricting access to different classes of **data**.



world_vaccination.xlsx - Microsoft Excel

Security Warning Data connections have been disabled Options...

E15 Moderna, Oxford/AstraZeneca, Pfizer/BioNTech

	A	B	C	D	E
1	Country	Doses Administered	Doses per 1000	Fully Vaccinated Population (%)	Vaccine being used in a country
2	World	3001136566	395.2	11	NIL
3	United States	324414371	991.6	47	Johnson&Johnson, Moderna, Pfizer/BioNTech
4	India	321423578	237.6	4.1	Covaxin, Oxford/AstraZeneca, Sputnik V
5	Brazil	96913929	462.7	12.2	Oxford / AstraZeneca, Oxford/AstraZeneca, Pfizer/BioNTech, Sinovac
6	United Kingdom	74638083	1122.6	47.4	Moderna, Oxford/AstraZeneca, Pfizer/BioNTech
7	Germany	72806699	878	35.9	Johnson&Johnson, Moderna, Oxford/AstraZeneca, Pfizer/BioNTech
8	Italy	50452251	834.9	29.9	Johnson&Johnson, Moderna, Oxford/AstraZeneca, Pfizer/BioNTech
9	Turkey	48938717	594.5	18.2	Pfizer/BioNTech, Sinovac
10	France	43803521	653.9	21	Johnson&Johnson, Moderna, Oxford/AstraZeneca, Pfizer/BioNTech
11	Japan	41836154	330.6	10.9	Moderna, Pfizer/BioNTech
12	Indonesia	40601932	151.7	4.9	Oxford/AstraZeneca, Sinovac
13	Russia	38773378	265.7	11.6	EpiVacCorona, Sputnik V
14	Mexico	36983641	293.1	11.8	CanSino, Oxford/AstraZeneca, Pfizer/BioNTech, Sinovac, Sputnik V
15	Canada	36199547	976.8	28.6	Moderna, Oxford/AstraZeneca, Pfizer/BioNTech
16	Spain	32282553	690.9	26.2	Johnson&Johnson, Moderna, Oxford/AstraZeneca, Pfizer/BioNTech
17	Poland	28601320	753.1	33.7	Johnson&Johnson, Moderna, Oxford/AstraZeneca, Pfizer/BioNTech
18	Chile	20403835	1089.4	48	CanSino, Oxford/AstraZeneca, Pfizer/BioNTech, Sinovac
19	Argentina	19951580	448.4	8.9	Oxford/AstraZeneca, Sinopharm/Beijing, Sputnik V
20	South Korea	18935546	366.7	9.2	Johnson&Johnson, Moderna, Oxford/AstraZeneca, Pfizer/BioNTech
21	Morocco	18862912	523.5	24.9	Oxford/AstraZeneca, Sinopharm, Sinopharm/Beijing
22	Colombia	15298930	308.1	10	Oxford/AstraZeneca, Pfizer/BioNTech, Sinovac
23	United Arab Emirates	15111234	1534.1	39	Oxford/AstraZeneca, Pfizer/BioNTech, Sinopharm, Sinopharm/Beijing, Sinopharm/Wuhan, Sputnik V

world vaccinated | Regression | Data Visualization

Ready

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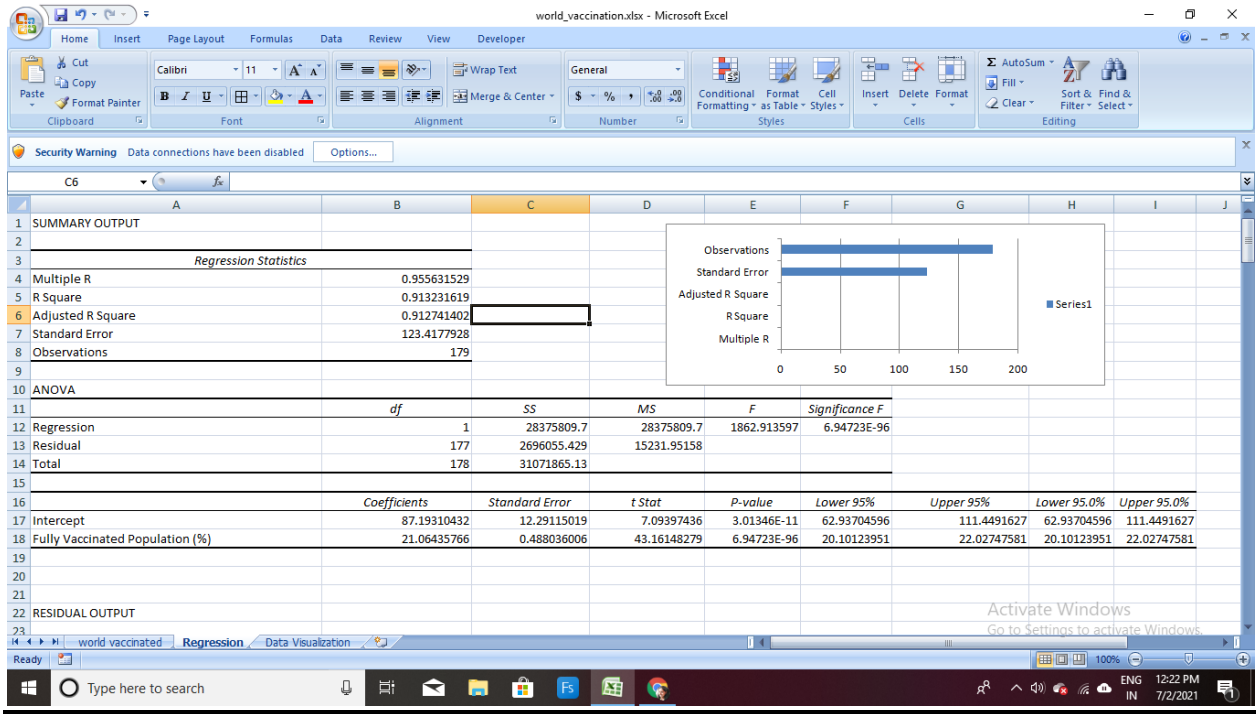
Regression

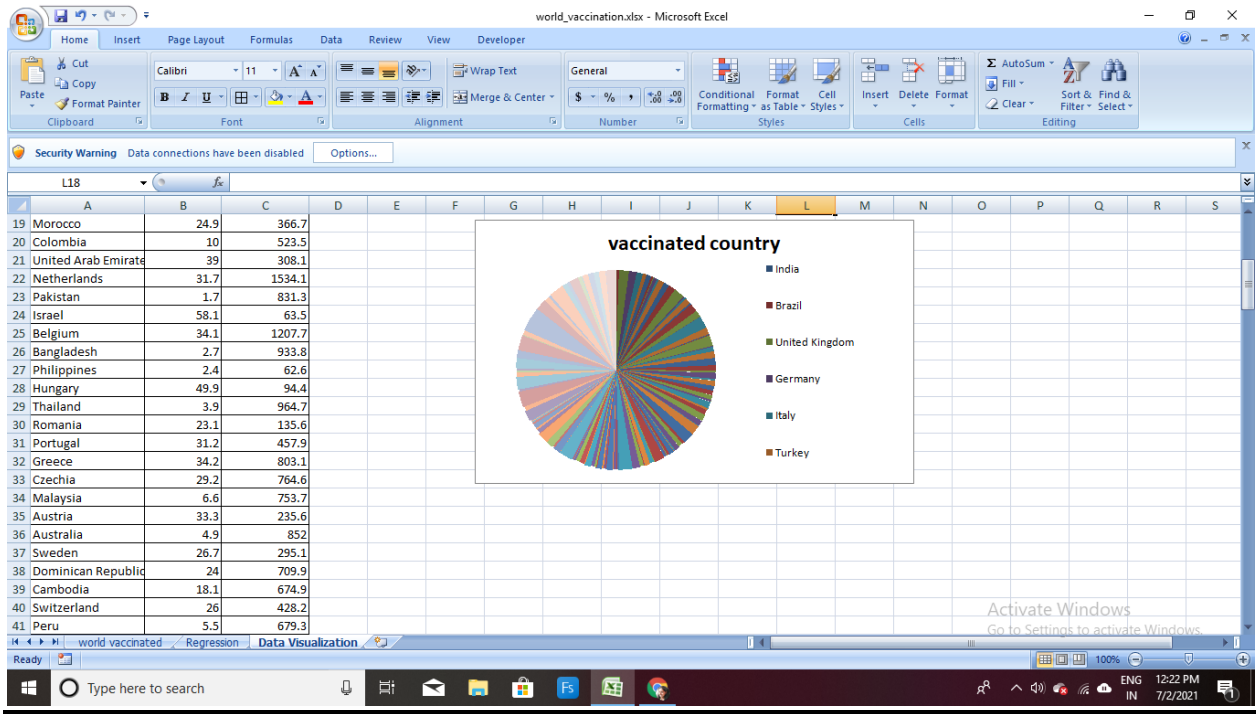
It is a set of statistical methods used for the estimation of relationships between a dependent variable and one or more independent.

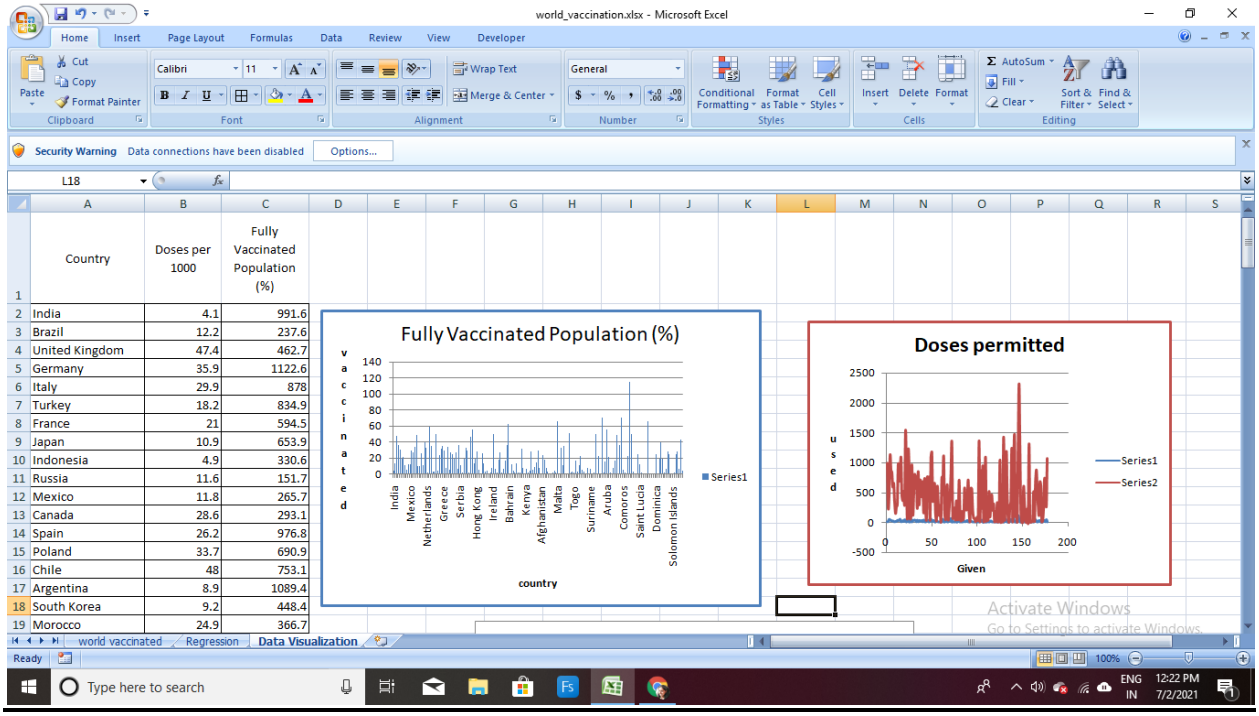


	A	B	C	D	E	F	G	H	I	J
1	SUMMARY OUTPUT									
2										
3		*Regression Statistics*								
4	Multiple R	0.955631529								
5	R Square	0.913231619								
6	Adjusted R Square	0.912741402								
7	Standard Error	123.4177928								
8	Observations	179								
9										
10	ANOVA									
11		*df*	*SS*	*MS*	*F*	*Significance F*				
12	Regression	1	28375809.7	28375809.7	1862.913597	6.94723E-96				
13	Residual	177	2696055.429	15231.95158						
14	Total	178	31071865.13							
15										
16		*Coefficients*	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*	
17	Intercept	87.19310432	12.29115019	7.09397436	3.01346E-11	62.93704596	111.4491627	62.93704596	111.4491627	
18	Fully Vaccinated Population (%)	21.06435766	0.488036006	43.16148279	6.94723E-96	20.10123951	22.02747581	20.10123951	22.02747581	
19										
20										
21										
22	RESIDUAL OUTPUT									
23										

Charts

In Microsoft Excel, a chart is often called a graph. It is a visual representation of data from a worksheet that can bring more understanding to the data than just looking at the numbers.





	Country	Doses per 1000	Fully Vaccinated Population (%)
2	India	4.1	991.6
3	Brazil	12.2	237.6
4	United Kingdom	47.4	462.7
5	Germany	35.9	1122.6
6	Italy	29.9	878
7	Turkey	18.2	834.9
8	France	21	594.5
9	Japan	10.9	653.9
10	Indonesia	4.9	330.6
11	Russia	11.6	151.7
12	Mexico	11.8	265.7
13	Canada	28.6	293.1
14	Spain	26.2	976.8
15	Poland	33.7	690.9
16	Chile	48	753.1
17	Argentina	8.9	1089.4
18	South Korea	9.2	448.4
19	Morocco	24.9	366.7

7. Conclusion

We created this small but interactive notebook that will keep updating the database until everyone is vaccinated. In this project I have used Pandas for easy WebSracping to get the data from pharmaceutical-technology.com. Hastening the deployment of the first-generation vaccine for the current pandemic could be achieved by propelling the nucleic acid-based priming vaccines followed by boosters of protein-based vaccines to curtail the mortality in high-risk groups such as elderly persons and healthcare workers. Parallel to this, more potent and efficient second-generation vaccine production for the future should be carried out to prevent disease spread, mortalities, and viral shedding.