

SC1015 MINI PROJECT

Statistical and Predictive Analysis of
Leading Death Causes in Southeast Asian
Countries



CONTENTS

1. PROBLEM STATEMENT AND AIM
2. METHODOLOGY FOR ANALYSIS
3. FOCUSED ANALYSIS ON COUNTRIES
4. METHODOLOGY FOR PREDICTION
5. CONCLUSION
6. STRATEGIC RECOMMENDATIONS AND FUTURE DIRECTION



PURPOSE:

- This project aims to enhance our understanding of public health challenges in Southeast Asia, guiding better healthcare strategies and resource allocation.

Objectives:

- Identify the leading causes of death in each country.
- Develop predictive models to forecast future mortality trends.



METHODOLOGY OUTLINE

- ANALYTICAL APPROACHES:
 - APPLIED MACHINE LEARNING MODELS INCLUDING RANDOM
 - LINEAR REGRESSION AND SV REGRESSION TO PREDICT FUTURE TRENDS.
 - TOOLS AND TECHNOLOGIES:
 - PYTHON FOR DATA PROCESSING,
 - SCIKIT-LEARN FOR PREDICTIVE MODELING
 - MATPLOTLIB/SEABORN FOR VISUALIZATIONS.
- 

DATA PREPERATION & EXPLORATION

LIBRARIES USED:

1. **NumPy** for numerical operations,
2. **pandas** for data manipulation
3. **Seaborn , PLOTLY & matplotlib** for visualization,
4. **plotly** for interactive plots

DATA FORMULATION & STATISTICS :

1. **Data Inspection:** Use DATA.HEAD, data.info() to number of entries, columns, and data types
2. **AID IN ASSESSING THE CLEANLINESS AND READINESS OF THE DATA.**

<class 'pandas.core.frame.DataFrame'>		
RangeIndex: 6840 entries, 0 to 6839		
Data columns (total 36 columns):		
#	Column	Non-Null Count
—	—	—
0	Entity	6840 non-null
1	Code	6840 non-null
2	Year	6840 non-null
3	Meningitis fatalities	6840 non-null
4	Dementia fatalities	6840 non-null
5	Parkinsons fatalities	6840 non-null
6	Nutritional deficiency fatalities	6840 non-null
7	Malaria fatalities	6840 non-null
8	Drowning fatalities	6840 non-null
9	Interpersonal violence fatalities	6840 non-null
10	Maternal disorder fatalities	6840 non-null
11	HIV/AIDS fatalities	6840 non-null
12	Drug disorder fatalities	6840 non-null
13	Tuberculosis fatalities	6840 non-null
14	Cardiovascular fatalities	6840 non-null
15	Lower respiratory fatalities	6840 non-null
16	Neonatal disorder fatalities	6840 non-null
17	Alcohol disorder fatalities	6840 non-null
18	Self harm fatalities	6840 non-null
19	Forces of nature fatalities	6840 non-null
20	Diarrheal disease fatalities	6840 non-null
21	Environmental exposure fatalities	6840 non-null
22	Neoplasm fatalities	6840 non-null
23	Conflict fatalities	6840 non-null
24	Diabetes fatalities	6840 non-null
25	Chronic kidney fatalities	6840 non-null
26	Poisoning fatalities	6840 non-null
27	Protein energy malnutrition fatalities	6840 non-null
28	Road injury fatalities	6840 non-null
29	Chronic respiratory fatalities	6840 non-null
30	Chronic liver fatalities	6840 non-null
31	Digestive disease fatalities	6840 non-null
32	Fire fatalities	6840 non-null
33	Acute hepatitis fatalities	6840 non-null
34	Measles fatalities	6840 non-null

DATA PREPERATION & EXPLORATION

STATISTICAL SUMMARY:

USE OF DATA.DESCRIBE() TO SHOW KEY STATISTICS (MEAN, MEDIAN, STANDARD DEVIATION, ETC.) FOR QUANTITATIVE INSIGHTS INTO THE DATA DISTRIBUTION.

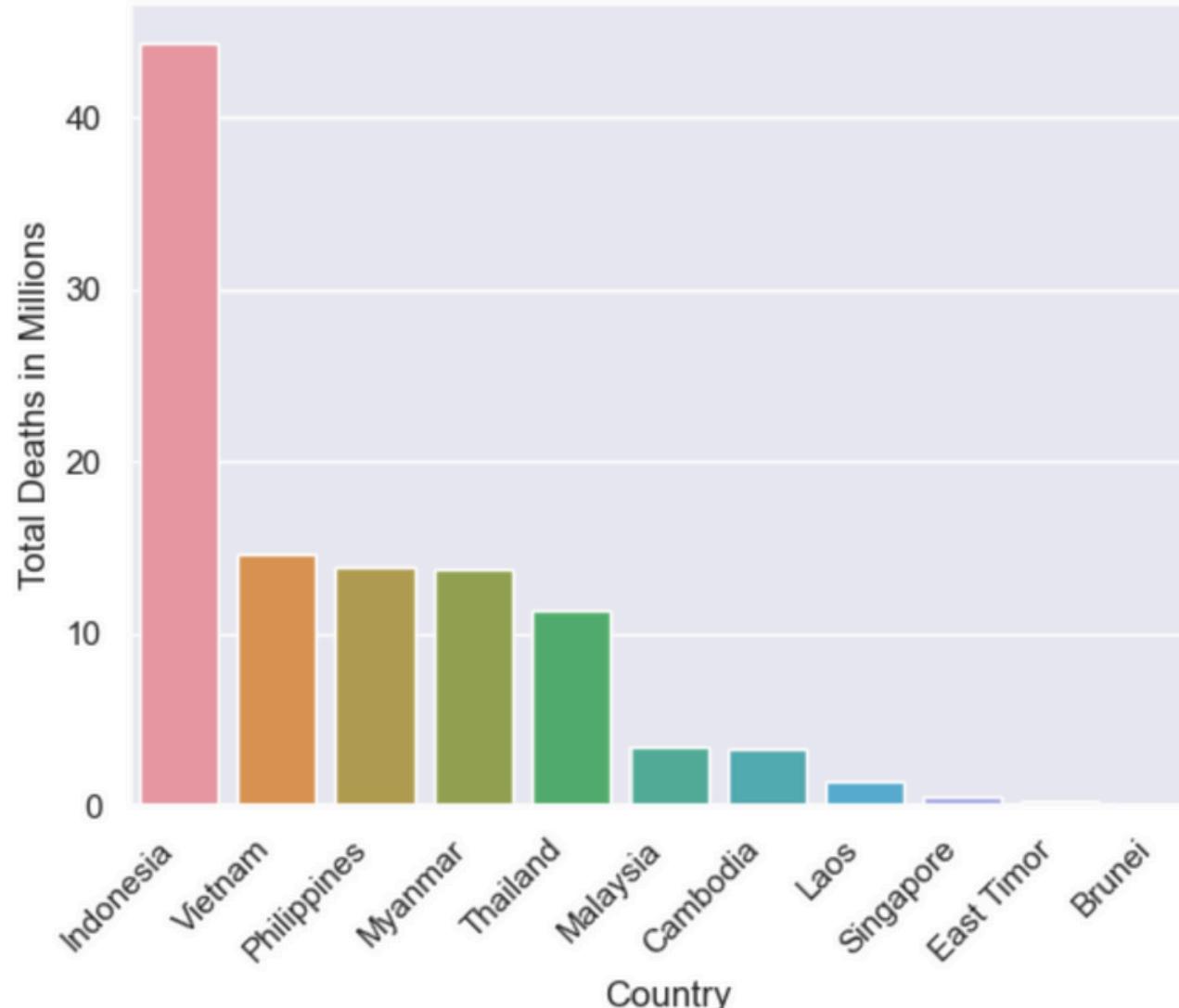
	Meningitis fatalities	Dementia fatalities	Parkinsons fatalities	Nutritional deficiency fatalities	Malaria fatalities	Drowning fatalities	Interpersonal violence fatalities	Maternal disorder fatalities	HIV/AIDS fatalities	...	Poisoning fatalities	ma
count	330.000000	330.000000	330.000000	330.000000	330.000000	330.000000	330.000000	330.000000	330.000000	...	330.000000	3
mean	2093.696970	4996.663636	1246.472727	2980.224242	889.503030	3065.872727	2684.272727	1806.554545	4213.733333	...	414.469697	26
std	3506.567499	6009.056841	1596.024356	5654.528979	1924.894354	3088.793790	4495.968138	3750.014376	6806.595823	...	562.817128	52
min	1.000000	7.000000	4.000000	1.000000	0.000000	13.000000	5.000000	1.000000	0.000000	...	1.000000	
25%	73.500000	349.000000	95.250000	172.000000	15.000000	89.750000	65.250000	139.500000	106.500000	...	6.000000	1
50%	683.500000	1986.000000	481.000000	803.000000	183.000000	1440.000000	718.000000	485.000000	1495.000000	...	180.500000	4
75%	2338.750000	8248.250000	1811.500000	2747.500000	662.000000	5855.250000	2385.750000	1850.750000	5404.500000	...	893.000000	24
max	19261.000000	24381.000000	7616.000000	25621.000000	13470.000000	11950.000000	16290.000000	18681.000000	35798.000000	...	2247.000000	242

DATA CLEANING

```
# Cleaning the dataset to include South East Asian countries only
```

```
countries_to_preserve = ['Brunei', 'Myanmar', 'Cambodia', 'Indonesia', 'Laos',
                         'Malaysia', 'Philippines', 'Singapore', 'Thailand', 'Vietnam', 'East Timor']
sea_data=filidata[filidata['Entity'].isin(countries_to_preserve)]
sea_data.head()
```

Countries with Highest Total Fatalities (1990-2019)

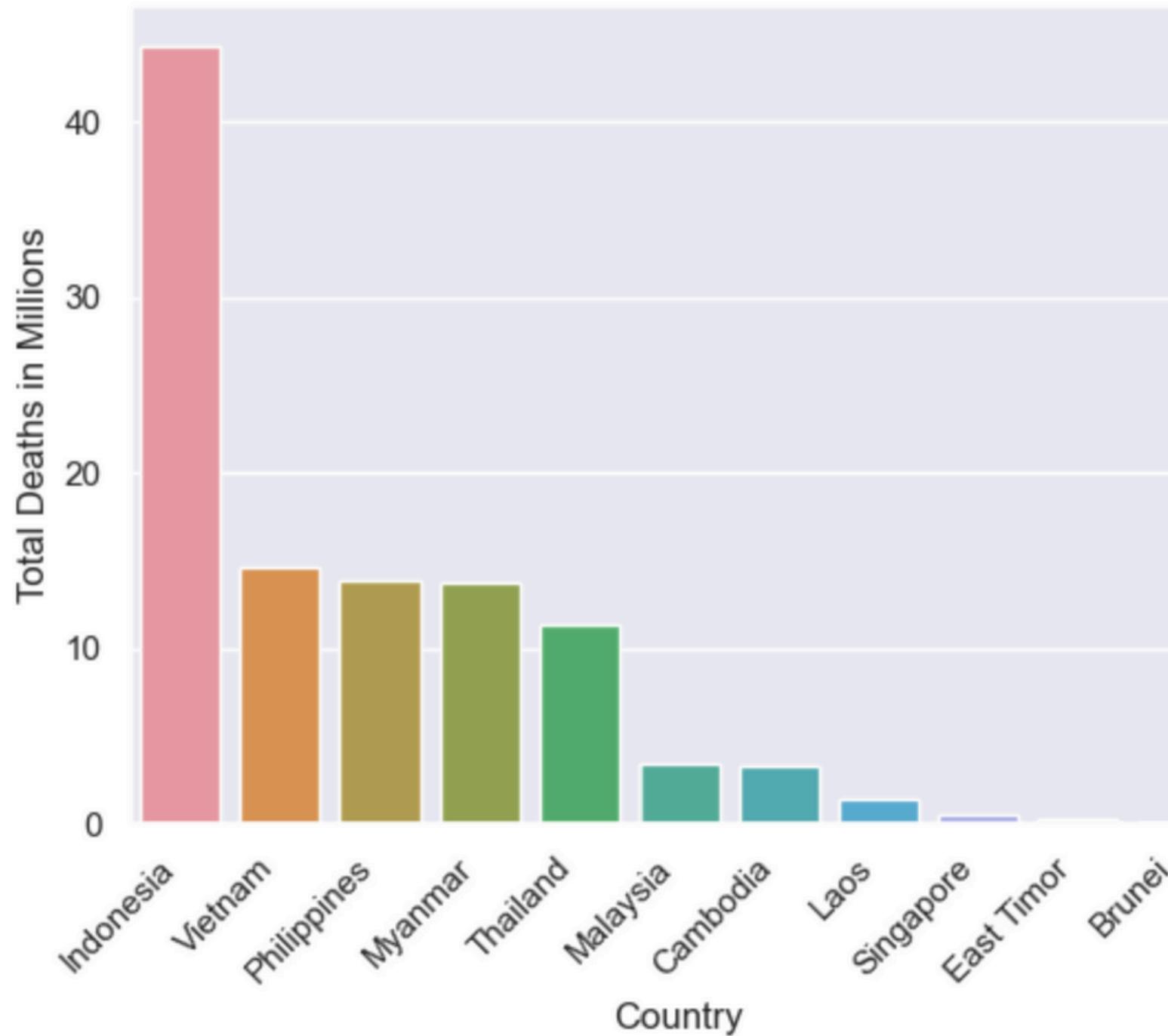


- **MANUALLY HANDLING MISSING VALUES: HANDLING MISSING VALUES, OUTLIERS, AND INCONSISTENCIES.**
- **OUTLIER DETECTION AND HANDLING: DISCUSS METHODS USED TO IDENTIFY OUTLIERS (E.G., IQR METHOD, Z-SCORES) COULD ALSO HAVE BEEN USED**

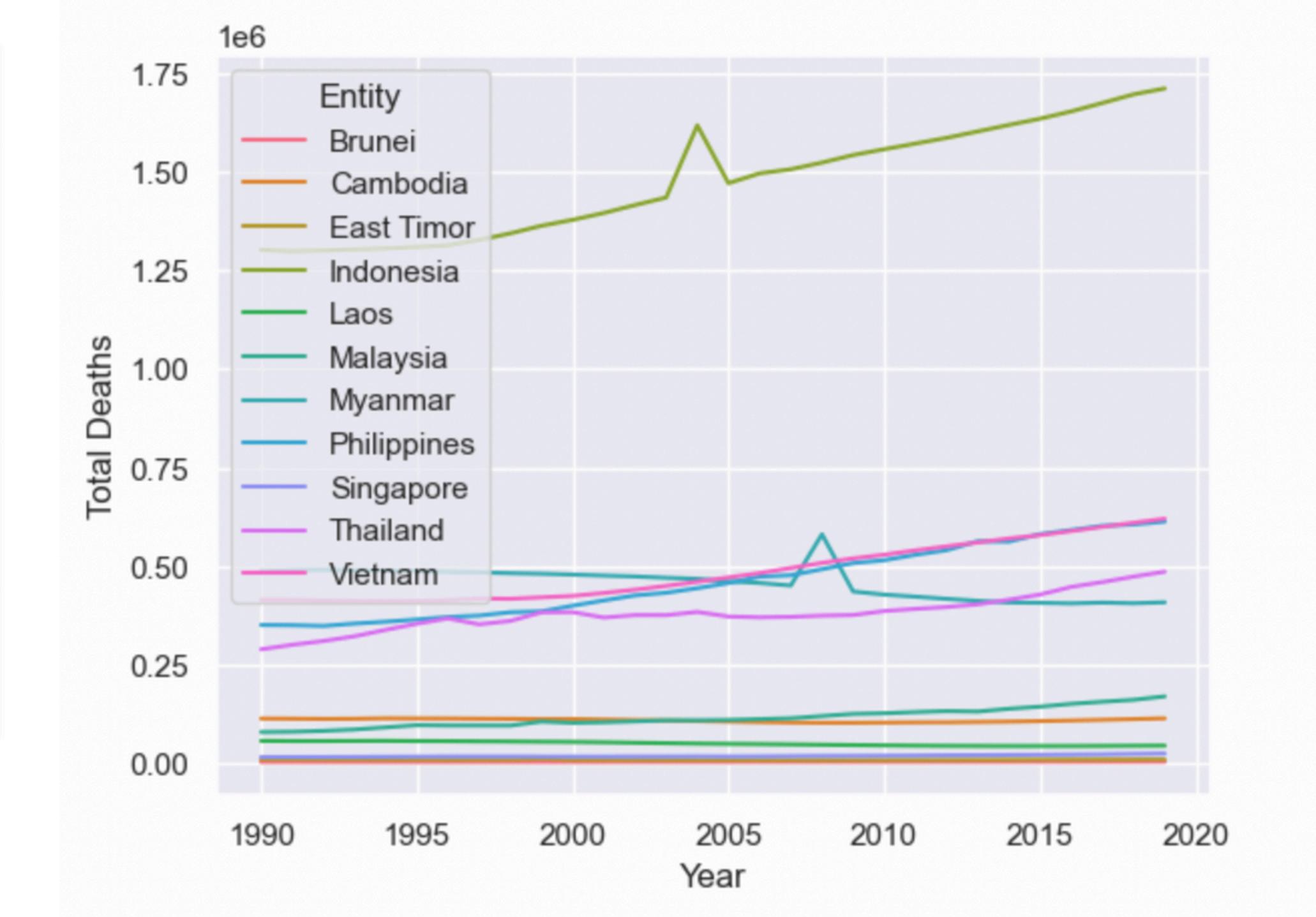
SEA COUNTRIES WITH HIGHEST FATALITIES

ANALYSING SEA COUNTRIES

Countries with Highest Total Fatalities (1990-2019)



BAR PLOT OF SEA COUNTRIES WITH HIGHEST FATALITIES



LINE PLOTS OF TOTAL DEATHS OVER THE YEARS BY COUNTRY

FOCUSED ANALYSIS ON INDONESIA (#1)

	Entity	Code	Year	Meningitis fatalities	Dementia fatalities	Parkinsons fatalities	Nutritional deficiency fatalities	Malaria fatalities	Drowning fatalities	Interpersonal violence fatalities	...	Poisoning fatalities	Protein energy malnutrition fatalities	Road injury fatalities	Chronic respiratory fatalities	Ch fata
2700	Indonesia	IDN	1990	19261	9425	2481	25621	3343	11950	2643	...	982	24297	49320	65596	5
2701	Indonesia	IDN	1991	18316	9809	2585	24409	3739	11381	2659	...	965	23110	49190	66641	5
2702	Indonesia	IDN	1992	17432	10237	2715	23425	3032	11068	2688	...	945	22138	49185	67974	6
2703	Indonesia	IDN	1993	16722	10664	2854	22602	3229	10668	2723	...	923	21319	49140	69200	6
2704	Indonesia	IDN	1994	16025	11101	2993	21797	2709	10206	2756	...	897	20518	48965	70252	6

CLEANING DATASET TO INCLUDE ONLY NECESSARY COLUMNS

	0	1	2	3	4	5	6	7	8	9	...	20	21	22	23	24	25	26	27	28	29
Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	...	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Meningitis fatalities	19261	18316	17432	16722	16025	15296	14587	14036	13744	13254	...	8637	8169	8085	7915	7184	6946	6469	5401	5030	4715
Dementia fatalities	9425	9809	10237	10664	11101	11539	11965	12438	12868	13307	...	18800	19291	19831	20365	20922	21485	22082	22729	23591	24381
Parkinsons fatalities	2481	2585	2715	2854	2993	3138	3289	3467	3635	3801	...	5819	6032	6220	6392	6564	6737	6970	7168	7393	7616
Nutritional deficiency fatalities	25621	24409	23425	22602	21797	21032	20200	20078	18823	18238	...	19607	20020	20320	20669	21152	21526	21104	20946	20607	20348

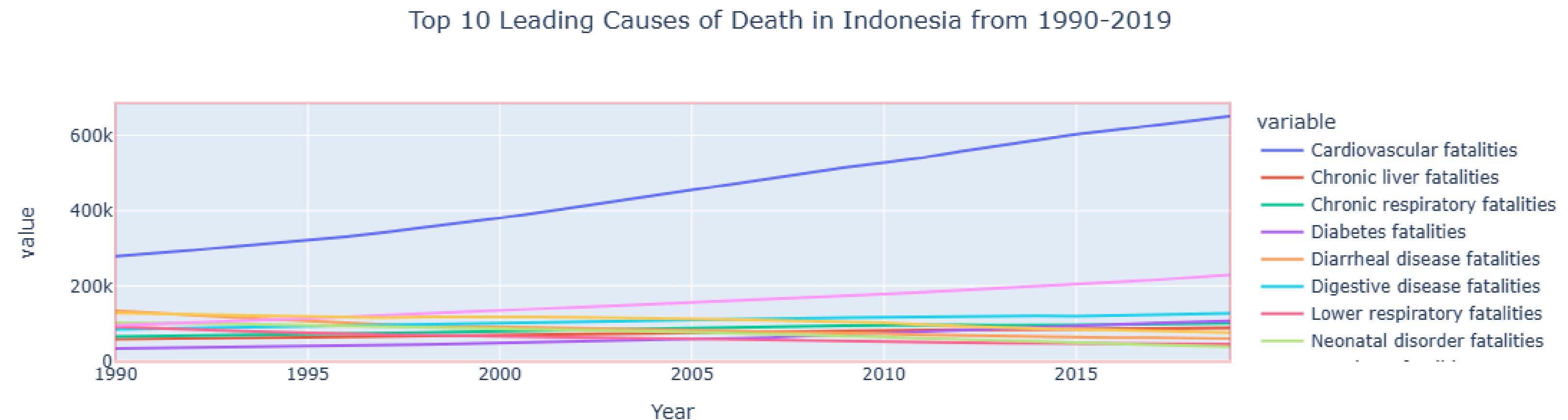
FOCUSED ANALYSIS ON INDONESIA (#1)

- **TOTAL DEATH COUNT/ 1000000:** CONVERTS THE TOTAL DEATH COUNT INTO MILLIONS
- **SORT_VALUES('TOTAL DEATH COUNT', ASCENDING=False):** SORTS 'TOTAL DEATH COUNT' IN DESCENDING ORDER,
- **TOP_10_CAUSES** SPECIFIES THAT ONLY THE 'CAUSE' AND 'TOTAL DEATH COUNT' COLUMNS

	Cause	Total Death Count
0	Cardiovascular fatalities	13.59
1	Neoplasm fatalities	4.67
2	Digestive disease fatalities	3.20
3	Tuberculosis fatalities	3.20
4	Diarrheal disease fatalities	2.59
5	Chronic respiratory fatalities	2.56
6	Chronic liver fatalities	2.25
7	Neonatal disorder fatalities	2.24
8	Diabetes fatalities	1.89
9	Lower respiratory fatalities	1.82

FOCUSED ANALYSIS ON INDONESIA (#1)

VISUALISATION OF TOP 10 LEADING CAUSES OF FATALITIES IN INDONESIA FROM 1990-2019



FOCUSED ANALYSIS ON VIETNAM (#2)

	Entity	Code	Year	Meningitis fatalities	Dementia fatalities	Parkinsons fatalities	Nutritional deficiency fatalities	Malaria fatalities	Drowning fatalities	Interpersonal violence fatalities	... Poisoning fatalities	Protein energy malnutrition fatalities	Road injury fatalities	Chronic respiratory fatalities	Chronic I fatalities	
6510	Vietnam	VNM	1990	2049	7765	1633	2734	694	10441	1630	...	1277	574	14690	26078	16
6511	Vietnam	VNM	1991	2078	7880	1662	2666	637	10019	1665	...	1292	548	14671	26201	16
6512	Vietnam	VNM	1992	1939	8002	1691	2564	677	9542	1691	...	1304	515	14629	26285	16
6513	Vietnam	VNM	1993	1829	8138	1727	2449	740	9094	1721	...	1313	480	14578	26363	16
6514	Vietnam	VNM	1994	1757	8300	1769	2327	841	8653	1749	...	1318	443	14528	26474	16

CLEANING DATASET TO INCLUDE ONLY NECESSARY COLUMNS

	0	1	2	3	4	5	6	7	8	9	...	20	21	22	23	24	25	26	27	28	29
Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	...	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Meningitis fatalities	2049	2078	1939	1829	1757	1659	1570	1466	1542	1348	...	1027	987	954	987	890	870	839	809	778	747
Dementia fatalities	7765	7880	8002	8138	8300	8482	8675	8882	9103	9350	...	14283	14875	15479	16048	16671	17223	17827	18405	18959	19460
Parkinsons fatalities	1633	1662	1691	1727	1769	1822	1880	1944	2011	2085	...	3362	3484	3604	3710	3818	3902	3998	4084	4177	4259
Nutritional deficiency fatalities	2734	2666	2564	2449	2327	2207	2068	1904	1750	1625	...	1379	1334	1280	1221	1158	1093	1029	966	960	954

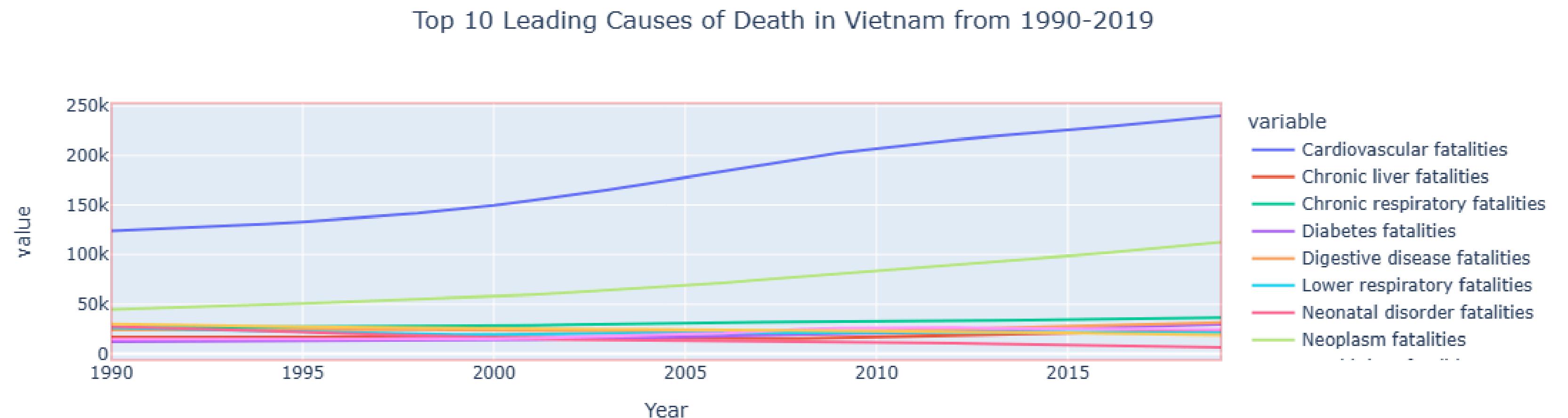
FOCUSED ANALYSIS ON VIETNAM (#2)

- **TOTAL DEATH COUNT/ 1000000:** CONVERTS THE TOTAL DEATH COUNT INTO MILLIONS
- **SORT_VALUES('TOTAL DEATH COUNT', ASCENDING=False):** SORTS 'TOTAL DEATH COUNT' IN DESCENDING ORDER,
- **TOP_10_CAUSES** SPECIFIES THAT ONLY THE 'CAUSE' AND 'TOTAL DEATH COUNT' COLUMNS

	Cause	Total Death Count
0	Cardiovascular fatalities	5.32
1	Neoplasm fatalities	2.16
2	Chronic respiratory fatalities	0.91
3	Digestive disease fatalities	0.74
4	Tuberculosis fatalities	0.73
5	Lower respiratory fatalities	0.64
6	Road injury fatalities	0.59
7	Diabetes fatalities	0.54
8	Chronic liver fatalities	0.53
9	Neonatal disorder fatalities	0.45

FOCUSED ANALYSIS ON VIETNAM (#2)

VISUALISATION OF TOP 10 LEADING CAUSES OF FATALITIES IN VIETNAM FROM 1990-2019



FOCUSED ANALYSIS ON PHILIPPINES (#3)

	Entity	Code	Year	Meningitis fatalities	Dementia fatalities	Parkinsons fatalities	Nutritional deficiency fatalities	Malaria fatalities	Drowning fatalities	Interpersonal violence fatalities	... Poisoning fatalities	Protein energy malnutrition fatalities	Road injury fatalities	Chronic respiratory fatalities	CI fat
4680	Philippines	PHL	1990	4196	4052	944	5524	905	5903	14186	...	246	5098	8280	20035
4681	Philippines	PHL	1991	4037	4266	956	5231	698	5694	14337	...	238	4822	8161	19978
4682	Philippines	PHL	1992	4110	4535	1013	5038	817	5526	14752	...	231	4628	8146	20713
4683	Philippines	PHL	1993	3996	4796	1068	4891	670	5374	15099	...	226	4478	8128	21425
4684	Philippines	PHL	1994	3637	5063	1130	4726	698	5154	15245	...	218	4305	8004	22140

CLEANING DATASET TO INCLUDE ONLY NECESSARY COLUMNS

	0	1	2	3	4	5	6	7	8	9	...	20	21	22	23	24	25	26	27	28	29	
	Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	...	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Meningitis fatalities	4196	4037	4110	3996	3637	3533	3461	3369	3296	3446	...	2928	2846	2902	2726	2654	2844	2496	2371	2176	2056	
Dementia fatalities	4052	4266	4535	4796	5063	5324	5532	5650	5672	5581	...	7370	7671	7991	8322	8611	8939	9299	9691	10056	10473	
Parkinsons fatalities	944	956	1013	1068	1130	1182	1235	1248	1252	1211	...	1708	1780	1873	1955	2031	2133	2213	2277	2350	2429	
Nutritional deficiency fatalities	5524	5231	5038	4891	4726	4612	4510	4361	4228	4279	...	3715	3734	3871	3912	3938	3994	3886	3800	3681	3611	

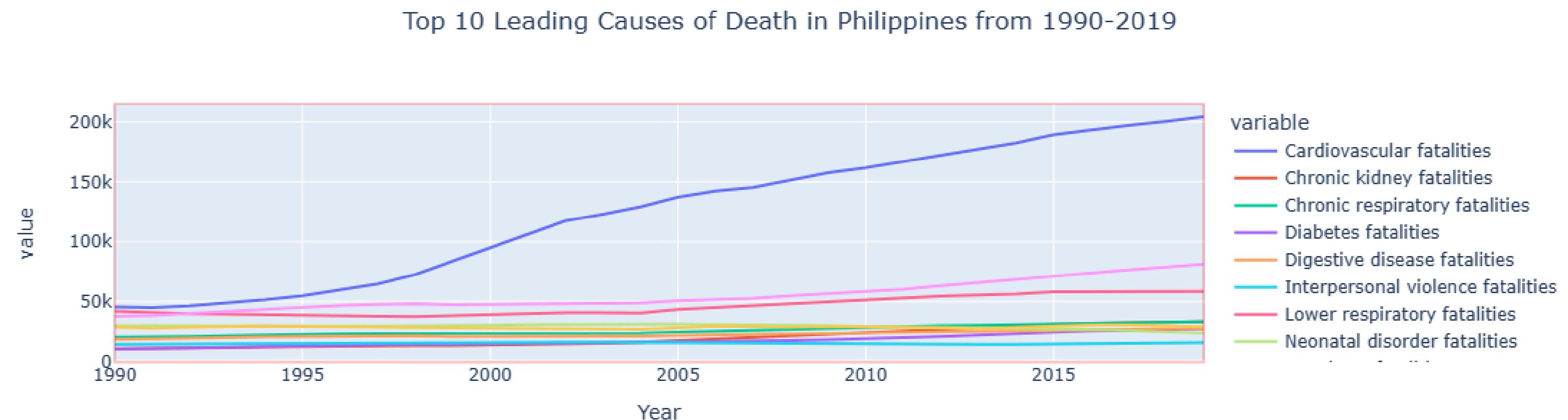
FOCUSED ANALYSIS ON PHILIPPINES (#3)

- **TOTAL DEATH COUNT/ 1000000:** CONVERTS THE TOTAL DEATH COUNT INTO MILLIONS
- **SORT_VALUES('TOTAL DEATH COUNT', ASCENDING=False):** SORTS 'TOTAL DEATH COUNT' IN DESCENDING ORDER,
- **TOP_10_CAUSES** SPECIFIES THAT ONLY THE 'CAUSE' AND 'TOTAL DEATH COUNT' COLUMNS

	Cause	Total Death Count
0	Cardiovascular fatalities	3.72
1	Neoplasm fatalities	1.64
2	Lower respiratory fatalities	1.39
3	Neonatal disorder fatalities	0.88
4	Tuberculosis fatalities	0.86
5	Chronic respiratory fatalities	0.78
6	Digestive disease fatalities	0.67
7	Chronic kidney fatalities	0.59
8	Diabetes fatalities	0.52
9	Interpersonal violence fatalities	0.46

FOCUSED ANALYSIS ON PHILIPPINES (#3)

VISUALISATION OF TOP 10 LEADING CAUSES OF FATALITIES IN PHILIPPINES FROM 1990-2019



FOCUSED ANALYSIS ON MYANMAR (#4)

	Entity	Code	Year	Meningitis fatalities	Dementia fatalities	Parkinsons fatalities	Nutritional deficiency fatalities	Malaria fatalities	Drowning fatalities	Interpersonal violence fatalities	...	Poisoning fatalities	Protein energy malnutrition fatalities	Road injury fatalities	Chronic respiratory fatalities	Chi fata
3930	Myanmar	MMR	1990	7684	2393	641	5882	5070	7186	1392	...	2211	5548	12360	37654	1
3931	Myanmar	MMR	1991	7622	2472	669	5732	3438	7202	1552	...	2247	5399	12574	38565	1
3932	Myanmar	MMR	1992	7489	2554	698	5533	3270	7111	1213	...	2203	5204	12653	39307	1
3933	Myanmar	MMR	1993	7331	2641	731	5308	3240	6971	1231	...	2183	4983	12699	40018	1
3934	Myanmar	MMR	1994	7120	2732	764	5058	3234	6894	1252	...	2152	4739	12692	40631	1

CLEANING DATASET TO INCLUDE ONLY NECESSARY COLUMNS

	0	1	2	3	4	5	6	7	8	9	...	20	21	22	23	24	25	26	27	28	29
Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	...	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Meningitis fatalities	7684	7622	7489	7331	7120	6931	6768	6582	6463	6269	...	3244	3039	2633	2517	2395	2242	1744	1500	1337	1246
Dementia fatalities	2393	2472	2554	2641	2732	2829	2930	3035	3145	3261	...	5072	5255	5436	5622	5830	6010	6200	6398	6597	6784
Parkinsons fatalities	641	669	698	731	764	800	836	874	912	951	...	1370	1401	1431	1465	1503	1545	1588	1631	1680	1726
Nutritional deficiency fatalities	5882	5732	5533	5308	5058	4809	4565	4306	4072	3828	...	1990	1887	1784	1707	1637	1567	1516	1463	1422	1386

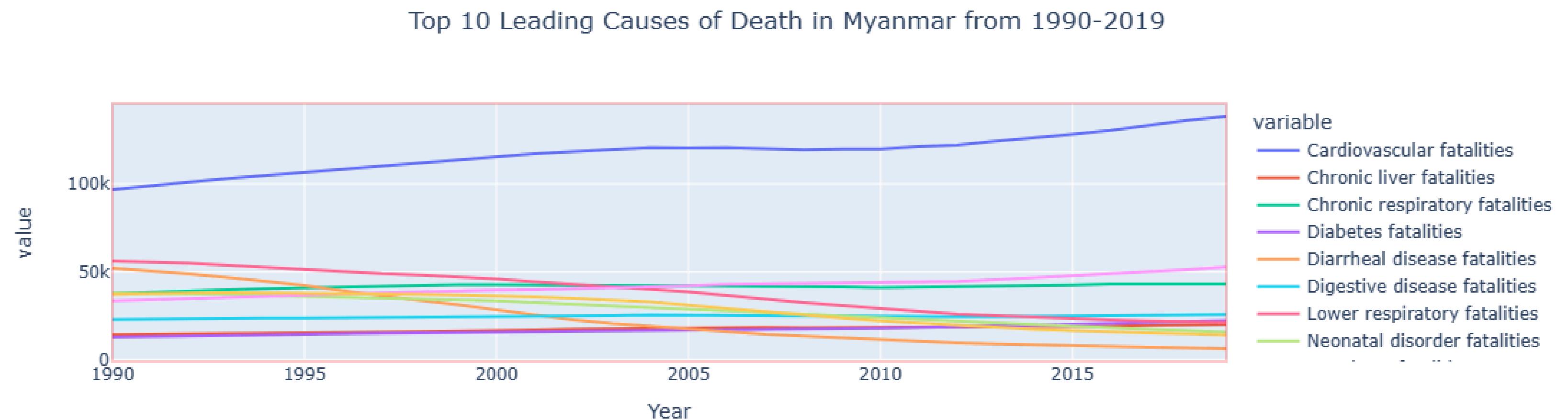
FOCUSED ANALYSIS ON MYANMAR (#4)

- **TOTAL DEATH COUNT/ 1000000:** CONVERTS THE TOTAL DEATH COUNT INTO MILLIONS
- **SORT_VALUES('TOTAL DEATH COUNT', ASCENDING=False):** SORTS 'TOTAL DEATH COUNT' IN DESCENDING ORDER,
- **TOP_10_CAUSES** SPECIFIES THAT ONLY THE 'CAUSE' AND 'TOTAL DEATH COUNT' COLUMNS

	Cause	Total Death Count
0	Cardiovascular fatalities	3.52
1	Neoplasm fatalities	1.26
2	Chronic respiratory fatalities	1.25
3	Lower respiratory fatalities	1.15
4	Tuberculosis fatalities	0.87
5	Neonatal disorder fatalities	0.86
6	Digestive disease fatalities	0.74
7	Diarrheal disease fatalities	0.71
8	Chronic liver fatalities	0.53
9	Diabetes fatalities	0.52

FOCUSED ANALYSIS ON MYANMAR (#4)

VISUALISATION OF TOP 10 LEADING CAUSES OF FATALITIES IN MYANMAR FROM 1990-2019



FOCUSED ANALYSIS ON THAILAND (#5)

	Entity	Code	Year	Meningitis fatalities	Dementia fatalities	Parkinsons fatalities	Nutritional deficiency fatalities	Malaria fatalities	Drowning fatalities	Interpersonal violence fatalities	...	Poisoning fatalities	Protein energy malnutrition fatalities	Road injury fatalities	Chronic respiratory fatalities	Chronic liver fatalities	Digestive disease fatalities	Fire fatalities	I
5940	Thailand	THA	1990	1359	5158	1219	1741	1375	6154	9143	...	273	1547	22029	20374	10446	17334	557	1
5941	Thailand	THA	1991	1324	5457	1317	1705	897	5973	9449	...	281	1510	23369	21266	10814	17944	594	1
5942	Thailand	THA	1992	1300	5749	1398	1658	780	5924	9545	...	288	1465	24581	21859	11048	18336	586	1
5943	Thailand	THA	1993	1296	6019	1461	1614	537	5943	9800	...	302	1423	26577	22333	11329	18774	612	1
5944	Thailand	THA	1994	1320	6281	1527	1578	456	6401	10149	...	323	1389	29217	22966	11640	19261	648	1

CLEANING DATASET TO INCLUDE ONLY NECESSARY COLUMNS

	0	1	2	3	4	5	6	7	8	9	...	20	21	22	23	24	25	26	27	28	29
Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	...	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Meningitis fatalities	1359	1324	1300	1296	1320	1342	1359	1249	1235	1338	...	1102	1068	1049	1012	1016	1021	1048	1038	1040	1037
Dementia fatalities	5158	5457	5749	6019	6281	6573	6912	7217	7639	8020	...	13132	13732	14401	15192	16083	17050	18144	19228	20380	21553
Parkinsons fatalities	1219	1317	1398	1461	1527	1587	1650	1608	1717	1838	...	2752	2823	2891	2995	3145	3321	3543	3714	3912	4082
Nutritional deficiency fatalities	1741	1705	1658	1614	1578	1541	1509	1400	1370	1300	...	745	734	740	765	794	824	865	909	953	992



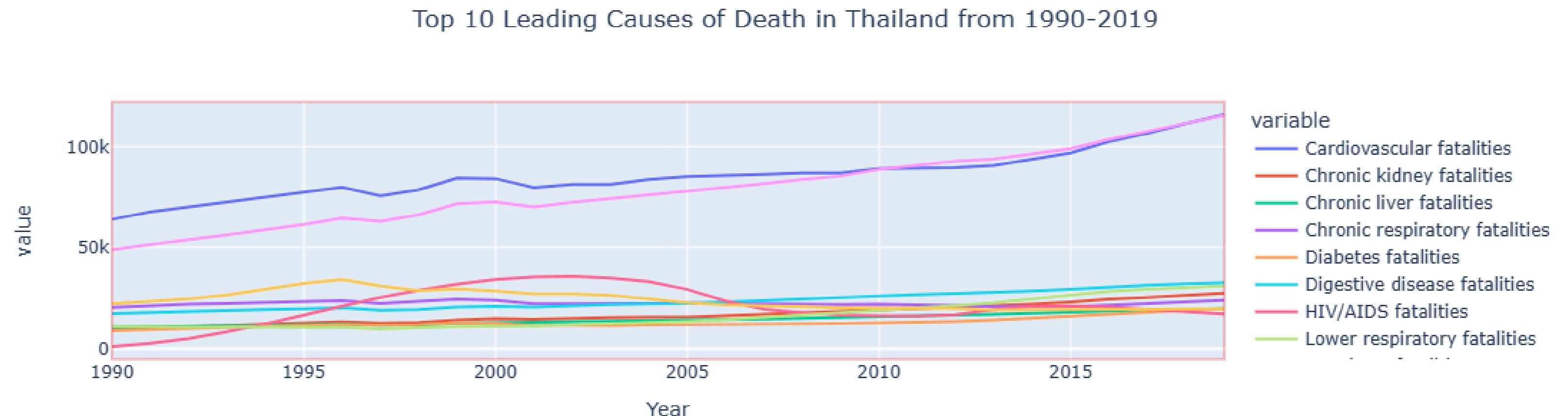
FOCUSED ANALYSIS ON THAILAND (#5)

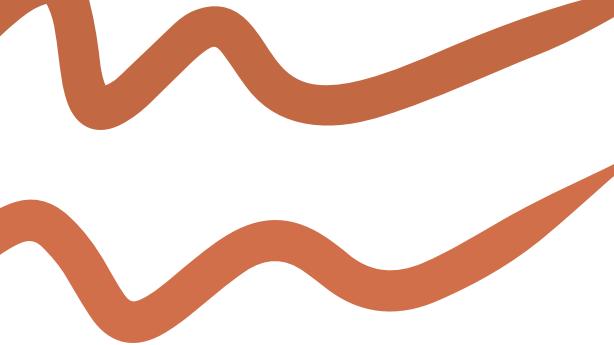
- **TOTAL DEATH COUNT/ 1000000:** CONVERTS THE TOTAL DEATH COUNT INTO MILLIONS
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- **TOP_10_CAUSES** SPECIFIES THAT ONLY THE 'CAUSE' AND 'TOTAL DEATH COUNT' COLUMNS

	Cause	Total Death Count
0	Cardiovascular fatalities	2.57
1	Neoplasm fatalities	2.37
2	Road injury fatalities	0.72
3	Digestive disease fatalities	0.71
4	Chronic respiratory fatalities	0.67
5	HIV/AIDS fatalities	0.62
6	Chronic kidney fatalities	0.51
7	Lower respiratory fatalities	0.49
8	Chronic liver fatalities	0.43
9	Diabetes fatalities	0.39

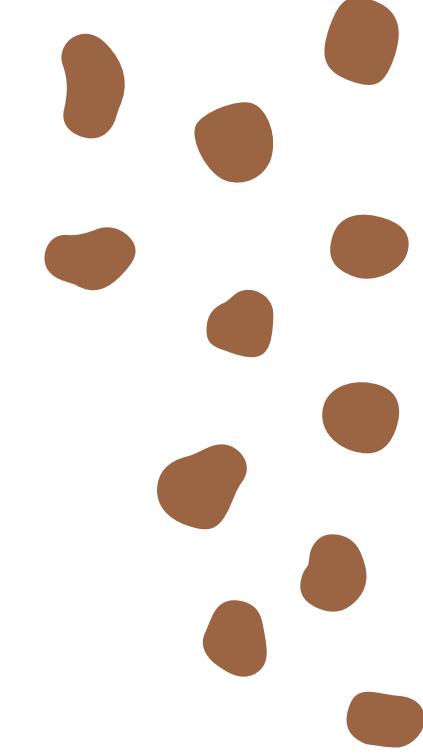
FOCUSED ANALYSIS ON THAILAND (#5)

VISUALISATION OF TOP 10 LEADING CAUSES OF FATALITIES IN THAILAND FROM 1990-2019





PREDICTIVE MODELING



LIBRARIES USED :

SKLEARN

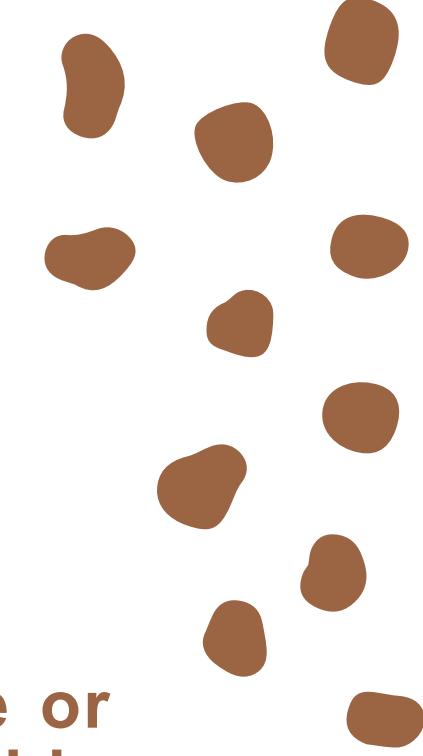
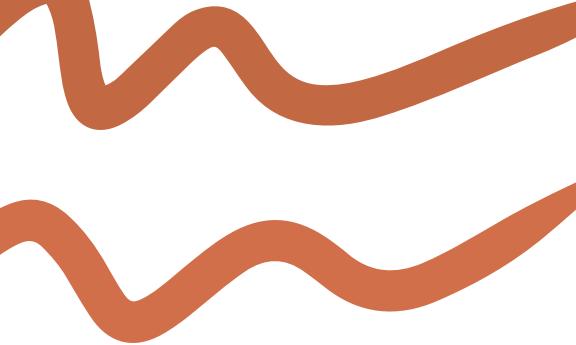
CLASSES USED :

SVR

STANDARDSCALER FROM SKLEARN.PREPROCESSING

MAKE_PIPELINE FROM SKLEARN.PIPELINE IMPORT

LINEARREGRESSION FROM SKLEARN.LINEAR_MODEL



PREDICTIVE MODELING

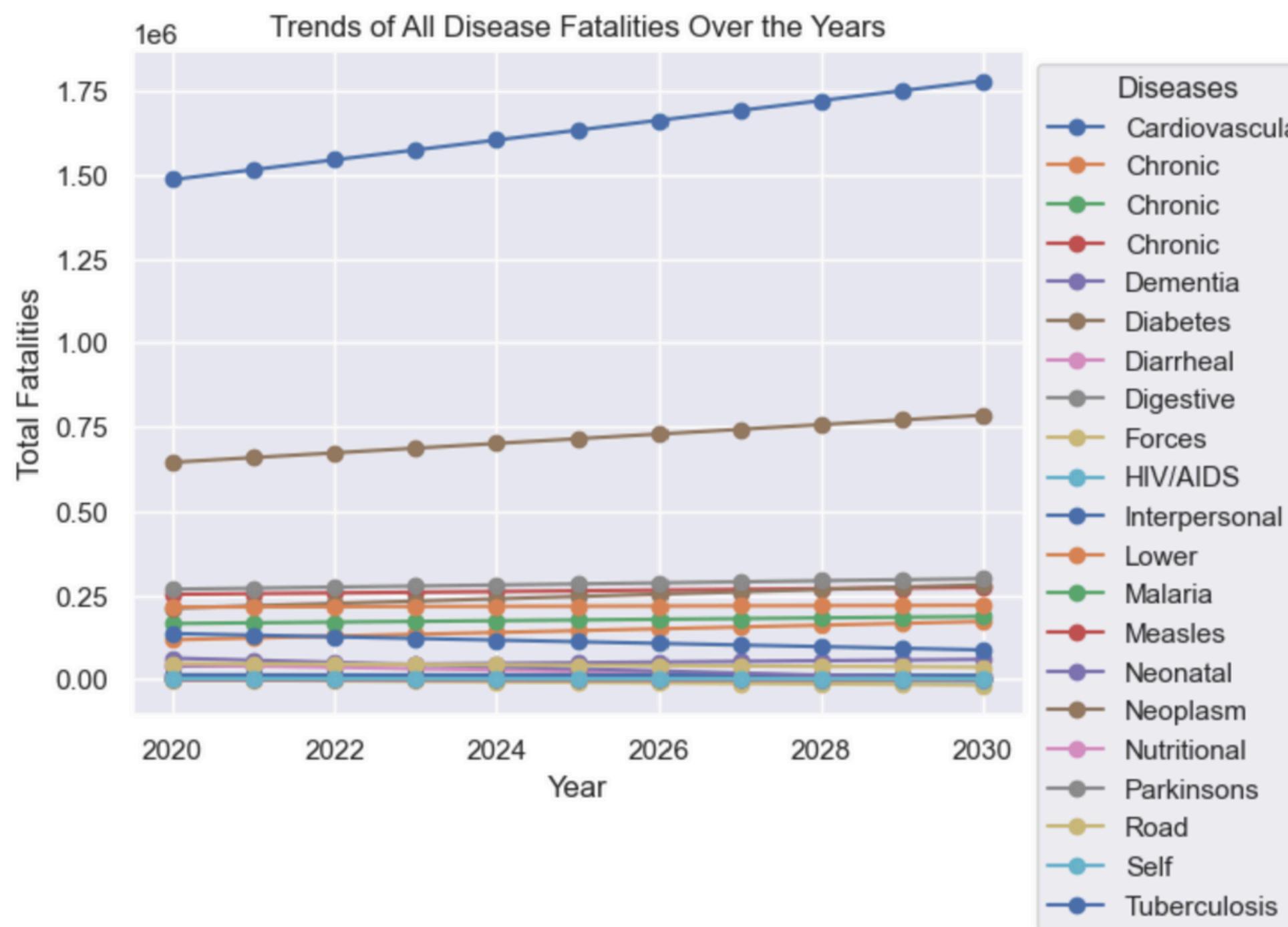
- LINEAR REGRESSION

Linear regression is used to predict a continuous outcome (like disease fatalities) based on one or more predictor variables. In this project, it was employed to establish a straightforward relationship between time (years) and disease fatalities, enabling predictions about future trends based on past data. This model is particularly useful for capturing and illustrating simple trends over time.

- SV REGRESSION

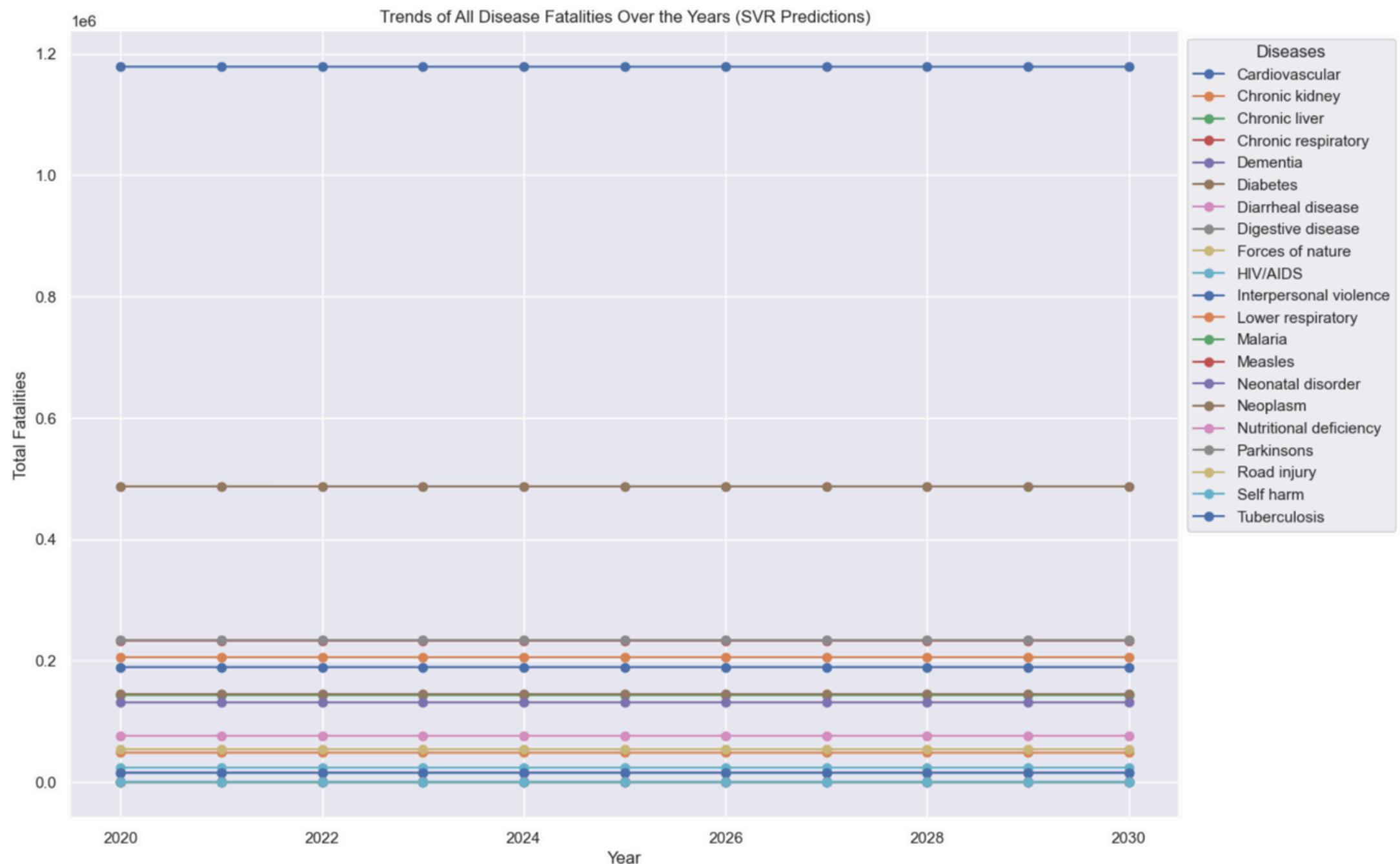
SVR is used to predict continuous outcomes with a focus on minimizing error margins, ensuring that most data points fall within a set distance from the regression line. Here, SVR has been utilized to make robust predictions of disease fatalities, even when the relationships between years and fatalities are more complex or nonlinear. SVR is adept at handling outliers and can model complex patterns more effectively than linear regression, which can be crucial when dealing with diverse and inconsistent healthcare data.

PREDICTIVE MODELING



VISUALISATION OF
THE PREDICTIONS
MADE BY THE
LINEAR REGRESSION
MODEL

PREDICTIVE MODELING



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CONCLUSION

The primary reasons for death in many Southeast Asian countries are consistently cardiovascular diseases and neoplasms.

Certain countries also have high rates of specific diseases such as road injuries and chronic respiratory conditions. Insights about the model:

Forecasting Precision: Utilizing machine learning models such as Linear Regression Model and Support Vector Regression Model, indicating promising capabilities in projecting future mortality trends from historical data.

Importance of Features: Research revealed that specific factors like 'Cardiovascular deaths' and 'Neoplasm deaths' were important indicators, leading to enhancements in model precision and understanding of healthcare priorities.

STRATEGIC RECOMMENDATIONS & FUTURE DIRECTIONS

Guidelines for promoting public health:

Improve healthcare systems with an emphasis on preventing and detecting cardiovascular and cancer diseases early.

Improve road safety precautions to decrease the number of deaths caused by road accidents, which rank among the leading causes of mortality in certain countries.

Implications for policies:

Promote measures that support improved healthcare infrastructure and the availability of medical services, with an emphasis on preventative healthcare.

Provide assistance for the advancement of treatments for chronic illnesses which are major contributors to mortality rates.

Future studies:

Explore the socio-economic factors that are causing the high rates of specific diseases.

Delve further into incorporating AI and machine learning into predictive health analytics to enhance accuracy of predictions and adjust public health strategies in real-time.

THANK YOU