



Descriptive Analysis [BTIBMB402]

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IBM COGNOS ANALYTICS



IBM Cognos Analytics
-
Covid-19 Dataset

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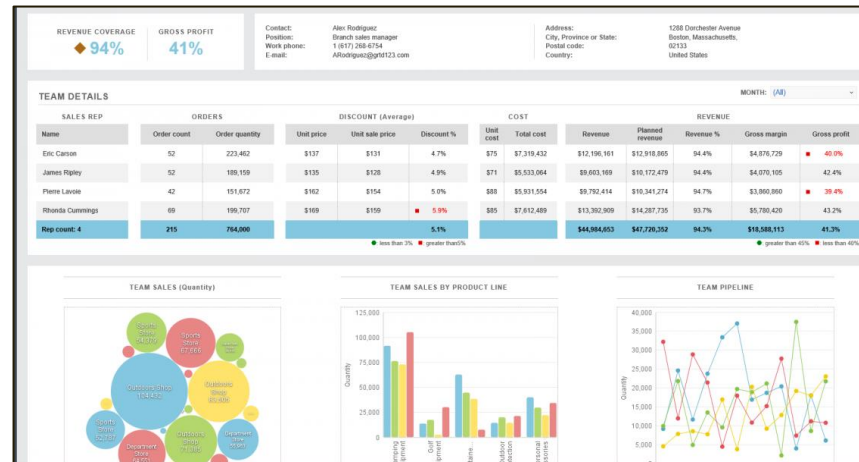
IBM Cognos Analytics



It is a Web-based data modelling used to create Interactive dashboards and enterprise reports having Data exploration and prediction.

- ❑ Accelerate data prep with AI
- ❑ Automate data exploration
- ❑ Visualize and report on data
- ❑ Scale and integrate
- ❑ Protect your data
- ❑ Modernize and maximize your investment

REPORT



It is a web-based report authoring tool that is used to build sophisticated, multiple-page, multiple-query reports against multiple databases. It allows user to include filters to customize and enhance there reports.

Reports on Covid-19 Dataset

Date	Confirmed	Deaths	Recovered	Active	New cases	New deaths
Jul 8, 2020	12,044,836	549,373	6,531,016	4,964,447	211,802	5,319
Jul 8, 2020 - Average	12,044,836					
6,531,016 - Average	12,044,836					
Jul 9, 2020	12,273,063	554,831	6,665,237	5,052,995	228,227	5,458
Jul 9, 2020 - Average	12,273,063					
6,665,237 - Average	12,273,063					
Jul 10, 2020	12,505,640	560,142	6,804,254	5,141,244	232,577	5,311
Jul 10, 2020 - Average	12,505,640					
6,804,254 - Average	12,505,640					
Jul 11, 2020	12,721,968	565,039	6,929,711	5,227,218	216,328	4,897
Jul 11, 2020 - Average	12,721,968					
6,929,711 - Average	12,721,968					
Jul 12, 2020	12,914,636	568,993	7,041,174	5,304,469	192,668	3,954
Jul 12, 2020 - Average	12,914,636					
7,041,174 - Average	12,914,636					
Jul 13, 2020	13,107,415	572,808	7,181,139	5,353,468	192,779	3,815
Jul 13, 2020 - Average	13,107,415					
Jul 23, 2020	15,510,481	633,506	8,710,969	6,166,006	282,756	9,966
Jul 23, 2020 - Average	15,510,481					
8,710,969 - Average	15,510,481					
Jul 24, 2020	15,791,645	639,650	8,939,705	6,212,290	281,164	6,144
Jul 24, 2020 - Average	15,791,645					
8,939,705 - Average	15,791,645					
Jul 25, 2020	16,047,190	644,517	9,158,743	6,243,930	255,545	4,867
Jul 25, 2020 - Average	16,047,190					
9,158,743 - Average	16,047,190					
Jul 26, 2020	16,251,796	648,621	9,293,464	6,309,711	204,606	4,104
Jul 26, 2020 - Average	16,251,796					
9,293,464 - Average	16,251,796					
Jul 27, 2020	16,480,485	654,036	9,468,087	6,358,362	228,693	5,415
Jul 27, 2020 - Average	16,480,485					
9,468,087 - Average	16,480,485					
Overall - Total						654,019
Overall - Average	4,406,960.0106383					

Filters used:

- Overall Total
- Overall Average
- Date wise
Ascending order

Reports on Covid-19 Dataset (contd)*

Country/Region	Continent	TotalCases	TotalDeaths	Population	TotalRecovered
Afghanistan	Asia	36,896	1,298	39,009,447	25,840
	Asia - Average				25,840
Afghanistan - Average					25,840
Albania	Europe	6,016	188	2,877,470	3,155
	Europe - Average				3,155
Albania - Average					3,155
Algeria	Africa	33,626	1,273	43,926,079	23,238
	Africa - Average				23,238
Algeria - Average					23,238
Andorra	Europe	944	52	77,278	828
	Europe - Average				828
Andorra - Average					828
Angola	Africa	1,483	64	32,956,300	520
	Africa - Average				520
Angola - Average					520
Antigua and Barbuda	North America	92	3	98,010	76
	North America - Average				76
Venezuela - Average					12,146
Vietnam	Asia	747	10	97,425,470	392
	Asia - Average				392
Vietnam - Average					392
Western Sahara	Africa	10	1	598,682	8
	Africa - Average				8
Western Sahara - Average					8
Yemen	Asia	1,768	508	29,886,897	898
	Asia - Average				898
Yemen - Average					898
Zambia	Africa	7,164	199	18,430,129	5,786
	Africa - Average				5,786
Zambia - Average					5,786
Zimbabwe	Africa	4,339	84	14,883,803	1,264
	Africa - Average				1,264
Zimbabwe - Average					1,264
Overall - Average					58,878.9804878

Filters used:

- Overall Average
- Group By
- Alphabetically Ascending order

CROSSTAB

		2013			2012
		Gross profit	Revenue	Cost of Goods Sold	Gross profit
Mountaineering Equipment	Climbing Accessories	\$15,110,667.58	\$29,483,205.87	\$14,372,538.29	\$15,286,177.75
	Tools	\$18,683,965.74	\$44,576,458.74	\$25,894,493.00	\$21,981,831.82
	Rope	\$12,487,333.44	\$39,444,903.89	\$26,957,570.45	\$14,677,667.24
	Safety	\$10,436,847.43	\$28,014,081.20	\$17,577,233.77	\$12,287,850.59
Outdoor Protection	First Aid	\$450,357.59	\$846,984.93	\$396,627.34	\$923,995.66
	Sunscreen	\$930,913.91	\$1,561,978.22	\$631,064.31	\$2,006,172.66

Crosstab reports, also known as matrix reports it is used to show the relationships between three or more query items. Crosstab reports show data in rows and columns with information summarized at the intersection points.

Crosstab reports on Covid-19 Dataset

WHO Region	South Africa	Mexico	Iran	UK	Argentina	Indonesia	Qatar	Ecuador	Israel	Panama	Belarus	Ghana	Algeria	Nepal	Austria
TotalTests	3,149,807	1,056,915	2,612,763	17,515,234	794,544	1,633,156	511,000	258,582	1,872,453	240,995	1,344,303	405,817		731,977	937,27
Serious,Critical	539	3,987	4,156	73	1,150		77	378	358	161		7	57		2
ActiveCases	141,264	103,325	24,678		124,092	37,587	3,083	13,342	25,556	24,186	4,167	3,059	9,115	6,296	1,38
NewRecovered		4,140													
TotalRecovered	387,316	308,848	277,463		99,852	75,645	108,831	71,318	53,427	45,658	63,756	36,384	23,238	15,389	19,59
NewDeaths		819													
NewCases		6,590													
TotalCases	538,184	462,690	320,117	308,134	228,195	118,753	112,092	90,537	79,559	71,418	68,503	39,642	33,626	21,750	21,69

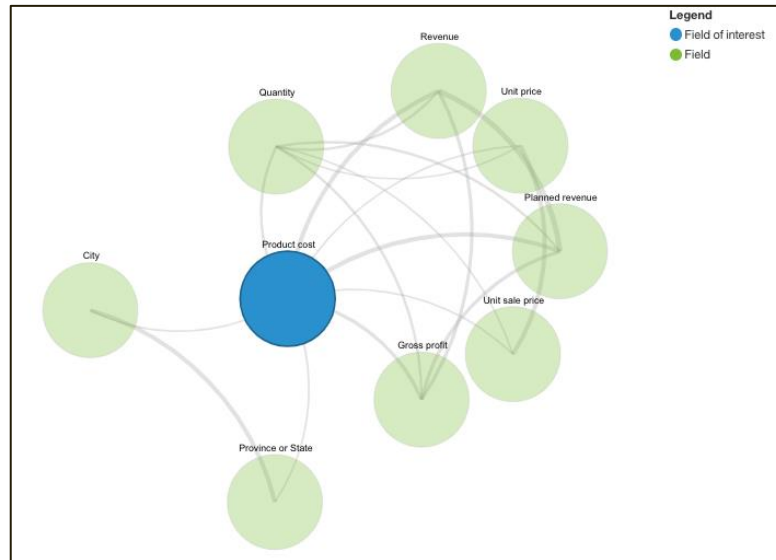
Crosstab report which is showing Total Cases, Serious, Critical, New Cases, New Deaths etc. in WHO regions

***Crosstab reports on
Covid-19 Dataset
(contd)****

WHO Region	Argentina	Algeria	Australia	Albania	Afghanistan	Total
TotalTests	794,544		4,631,419	38,997	90,396	5,555,356
Serious,Critical	1,150	57	52	23	31	1,313
ActiveCases	124,092	9,115	8,694	2,673	9,758	154,332
NewRecovered						
TotalRecovered	99,852	23,238	10,941	3,155	25,840	163,026
NewDeaths						
NewCases						
TotalCases	228,195	33,626	19,890	6,016	36,896	324,623

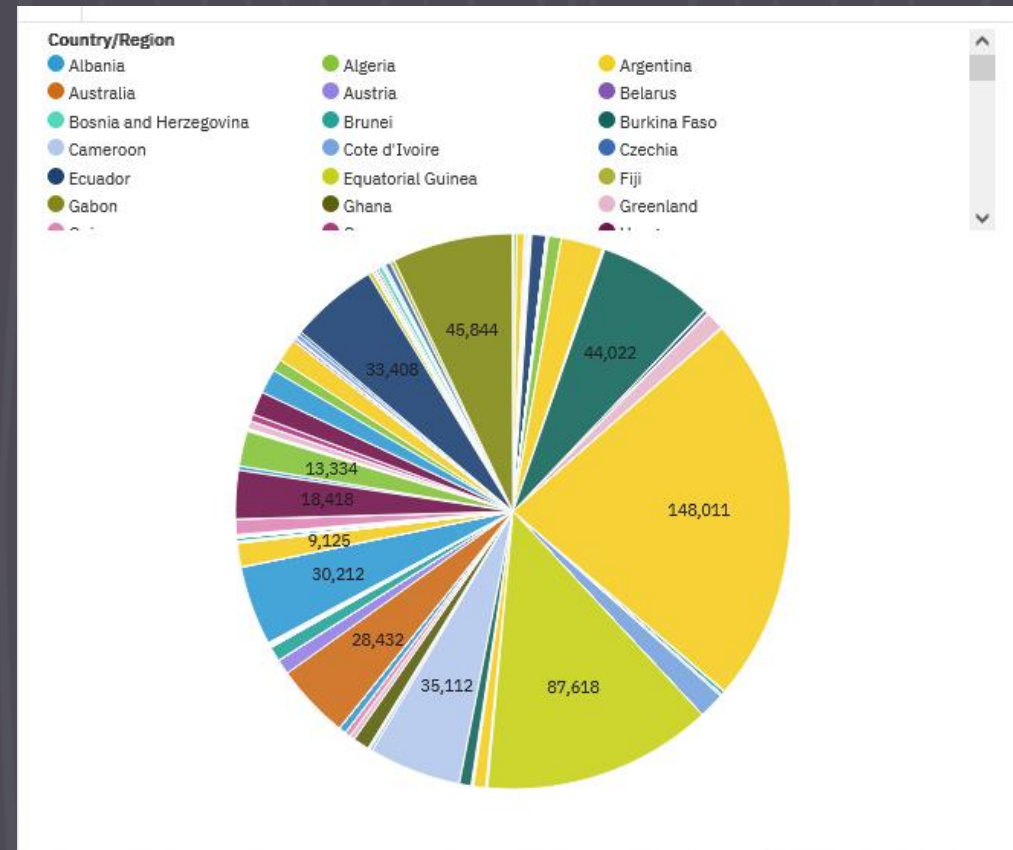
Crosstab report with TOTAL filter which is showing Total Cases, Serious, Critical, New Cases, New Deaths etc. in WHO regions

VISUALIZATION



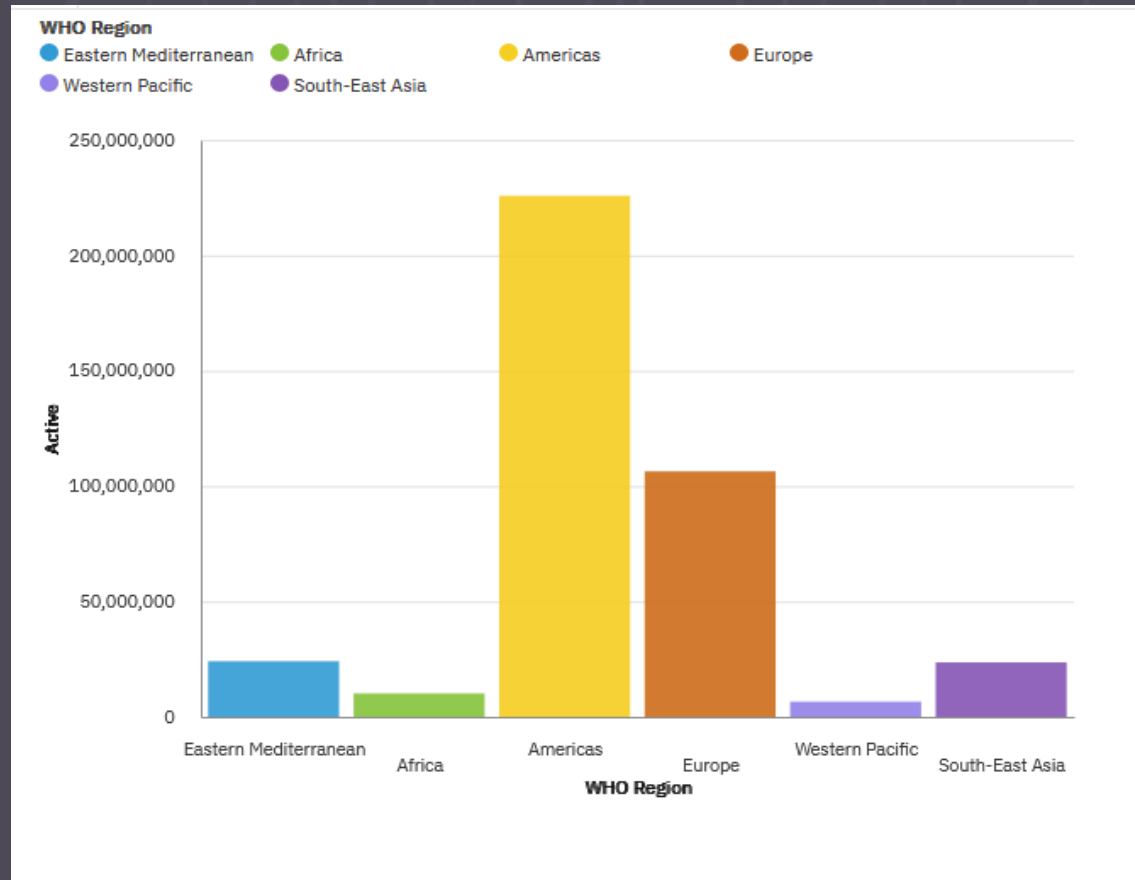
Visualizations help report consumers to spot patterns and outliers and to understand data. We use IBM Cognos Analytics visualization tools to incorporate diverse types of visualizations and greater interactivity into the IBM Cognos reports.

Visualization in Reports on Covid-19 dataset



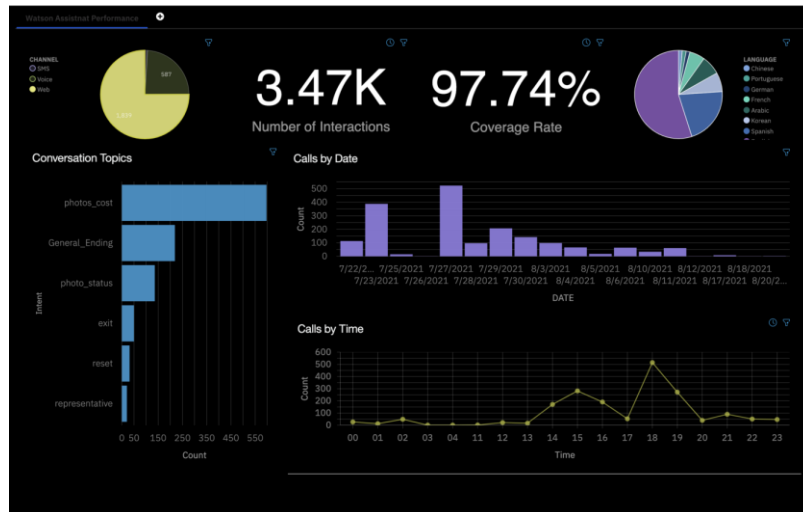
This PIE-CHART contains data of 'Death by Country' record.

***Visualization in Reports on
Covid-19 dataset (contd)****



The BAR- GRAPH contains Active Cases in WHO region data.

DASHBOARD



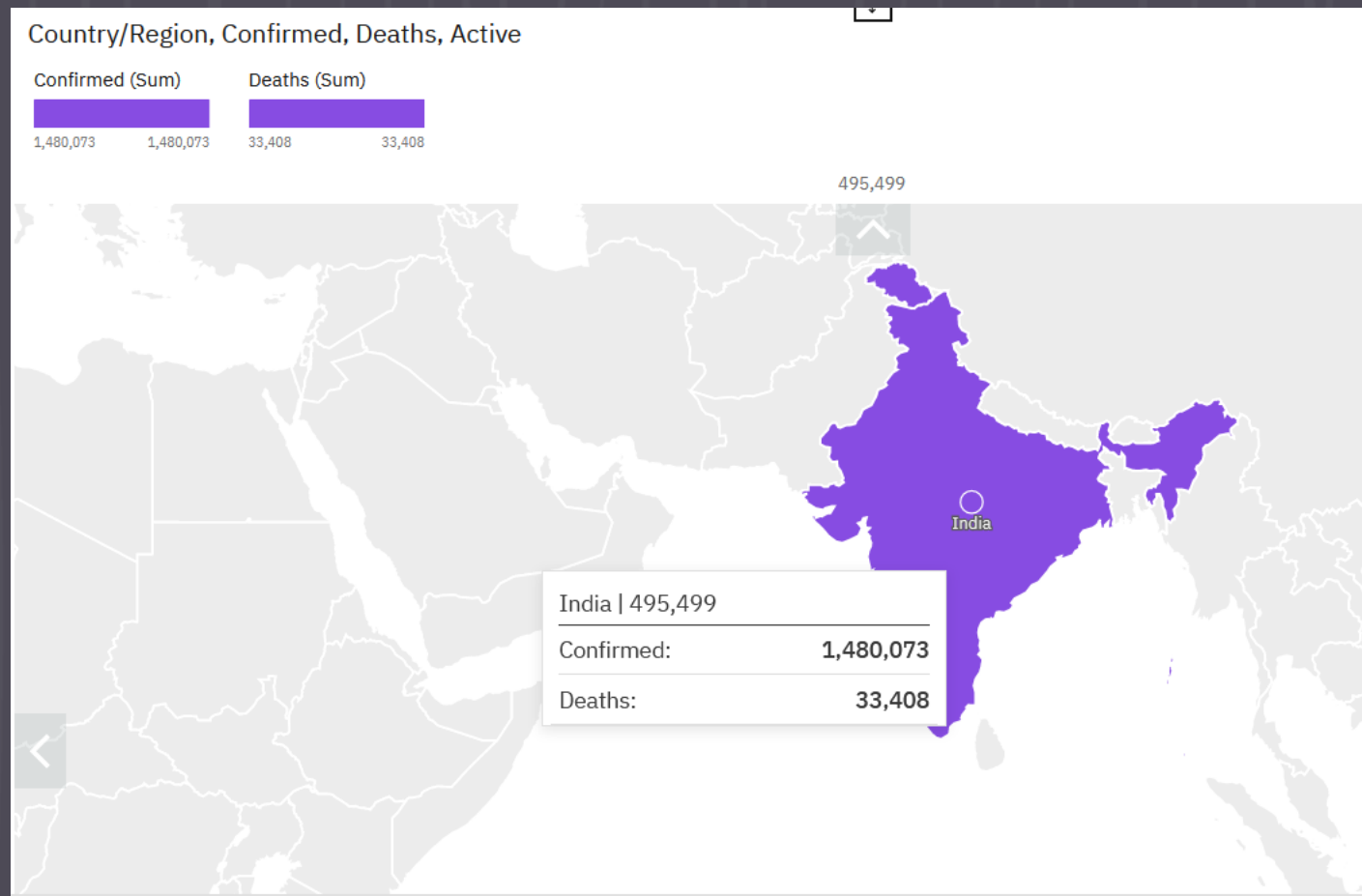
Dashboard allows us to explore powerful visualizations of our data in IBM Cognos Analytics and discover patterns and relationships that impact our business. Later we can communicate the insights that has been discovered in a dashboard and share it with others.

Use Of Dashboard on Covid-19 Dataset



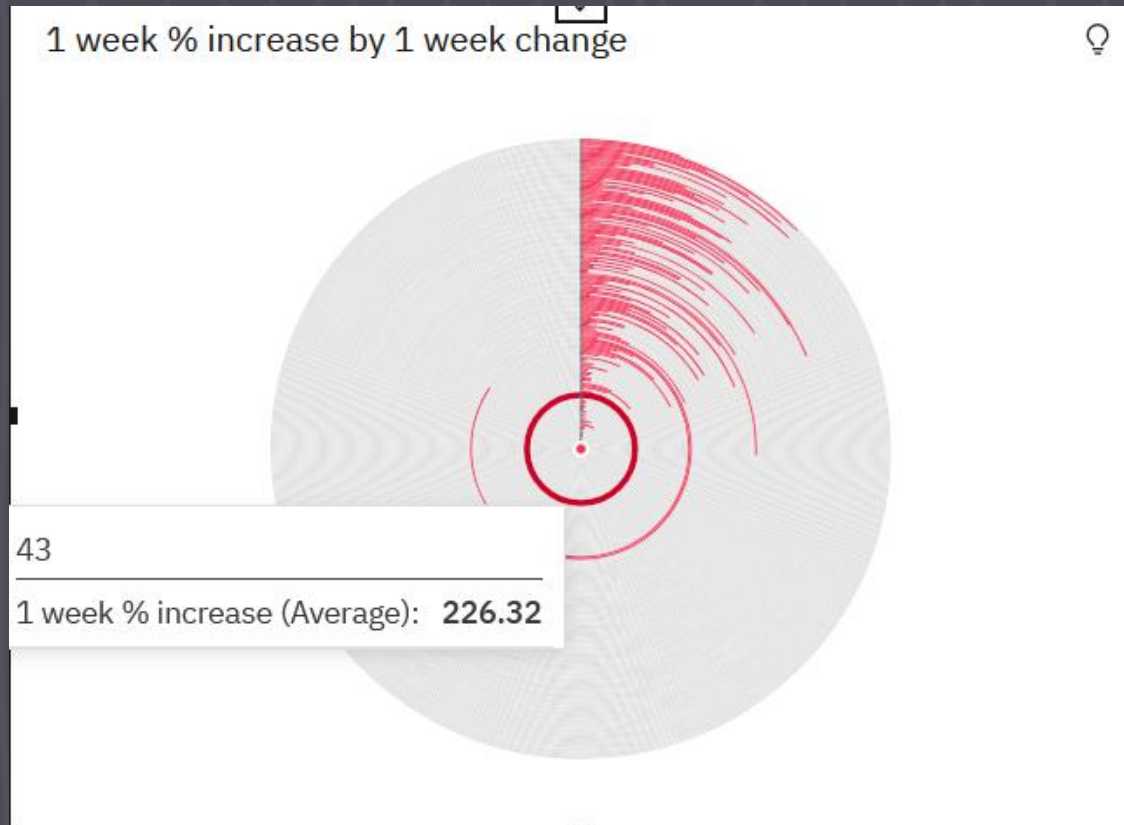
This is WORD CLOUD
Feature used in
Dashboard of WHO
regions.

Use Of Dashboard on Covid-19 Dataset (contd)*



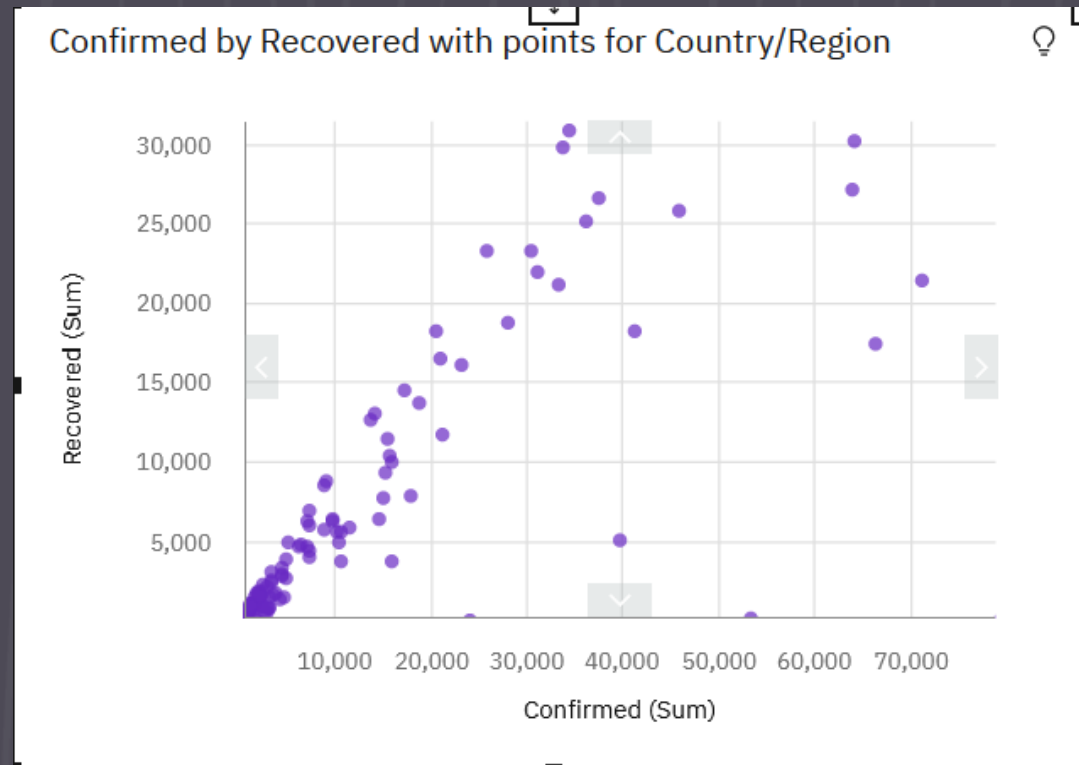
This is the
LEGACY MAP
featuring INDIA.

*Use Of Dashboard on
Covid-19 Dataset
(contd)**



This is Radial Feature providing data of 1 week % increase by 1 week change.

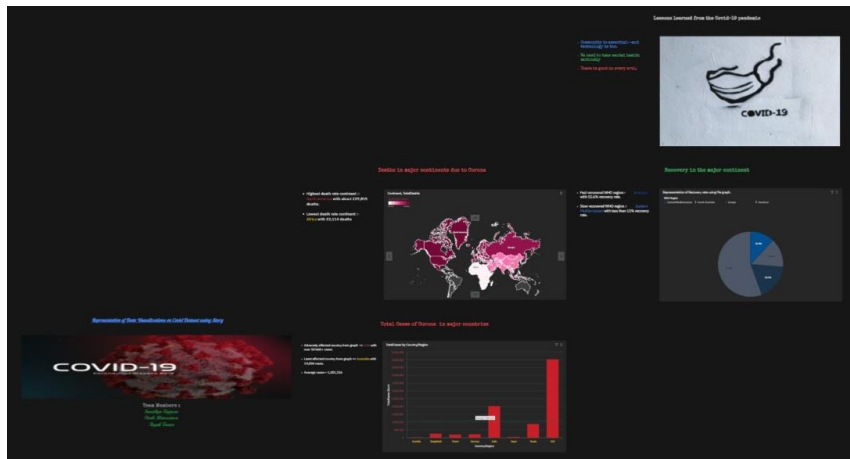
***Use Of Dashboard on
Covid-19 Dataset
(contd)****



This is SCATTER feature showing record of Confirmed by Recovered patients.

STORY

A story is a type of view. A story is composed of a set of scenes that are displayed in sequence over time. Stories can be used to provide your data with a visual narrative. Stories can help you inform and engage the audience. We can use stories in IBM Cognos Analytics to create scenes that visualize your data and to tell a narrative.



Story Representation

Total Cases of Corona in major countries

- Adversely affected country from graph => **USA** with over 50 lakh+ cases.
- Least affected country from graph => **Australia** with 19,890 cases.
- Average cases = 1,081,516

TotalCases by Country/Region



Story Representation (contd)*

Deaths in major continents due to Corona

- Highest death rate continent :-
North America with about 229,855 deaths.
- Lowest death rate continent :-
Africa with 22,114 deaths



**Story
Representation
(contd)***

Recovery in the major continent

- Fast recovered WHO region:- **America** with 55.6% recovery rate.
- Slow recovered WHO region :- **Eastern Mediterranean** with less than 15% recovery rate.

Representation of Recovery rate using Pie graph.

WHO Region



EasternMediterranean



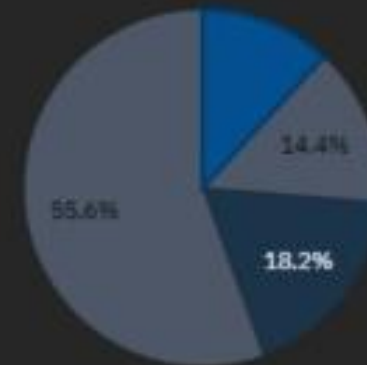
South-EastAsia



Europe



Americas



*Story
Representation
(contd)**

Lessons learned from the Covid-19 pandemic

- Community is essential—and technology is too.
- We need to take mental health seriously
- There is good in every evil.



Story View

Lessons learned from the Covid-19 pandemic

- Security is essential—and technology is key.
- We need to have social facilities virtually.
- There is good in every evil.



Deaths in major continents due to Corona

- Highest death rate continent > North America with about 229,878 deaths.
- Lowest death rate continent > Africa with 22,314 deaths.



- Fast recovered WHO region > Europe with 52.6% recovery rate.
- Slow recovered WHO region > South America with less than 10% recovery rate.

Recovery in the major continent



Representation of these Visualizations as Covid Dataset using Story



Text Numbers:
 Scientific Notation
 Field / Dimension
 Rapid Search

Total Cases of Corona in major countries

- Fastest affected country from graph > Italy with over 500,000 cases.
- Least affected country from graph > Australia with 15,000 cases.
- Average cases = 1,382,314



Bibliography

- ❑ www.google.com/
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- ❑ www.ibm.com
- ❑ <https://www.ibm.com/docs/en/cognos-analytics/11.1.0?topic=stories->
- ❑ <https://www.ibm.com/docs/en/cognos-analytics/11.0.0?topic=stories-dashboards>
- ❑ <https://www.ibm.com/docs/en/cognos-analytics/11.0.0?topic=library-visualizations>
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THANK YOU!