

The background of the slide features a close-up, artistic rendering of several COVID-19 virus particles. These particles are depicted as spherical, greyish-blue structures with a textured, almost fibrous surface. Scattered across these surfaces and in the surrounding space are numerous small, bright red, crown-shaped protrusions, which represent the virus's surface proteins. Some yellowish-gold dots are also visible, likely representing the viral RNA. The overall effect is a detailed, scientific-looking illustration of the virus.

Covid-19 Positive Cases in California

Data Exploration and Exploratory Data Analysis

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Background & Motivation

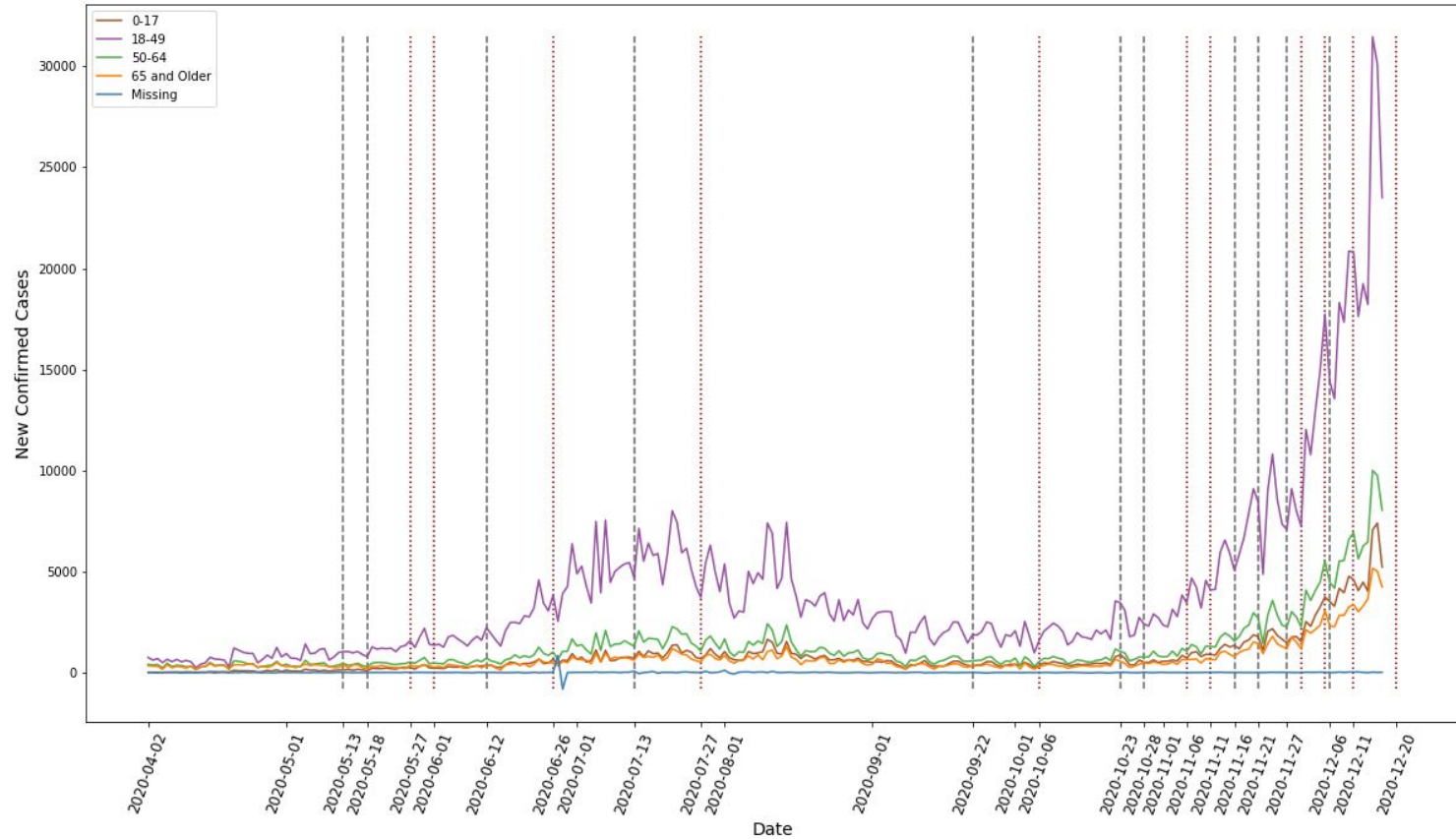
- Covid-19 is a new illness that affects one's respiratory system. It's spread through respiratory droplets and can be deadly, especially for people over the age of 65.
- The United States have had a difficult time handling the pandemic and state governors are told that they are responsible for handling the pandemic with little to no federal help.
- On March 16, 2020, stay-at-home orders were put into place in California to slow the spread of Covid-19.

Data Exploration

Daily New Confirmed Cases in California

Starting on 2020-04-02 to 2020-12-18

Based on Age Group



Data Exploration

Date	Age Group	Total Positive Cases	New Confirmed Cases
2020-04-02	0-17	120	17
2020-04-02	18-49	5302	748
2020-04-02	50-64	2879	406
2020-04-02	65 and Older	2342	330
2020-04-02	Missing	58	8

Date	Age Group	Total Positive Cases	New Confirmed Cases
2020-12-16	0-17	208045	5221
2020-12-16	18-49	1043558	23502
2020-12-16	50-64	331246	8031
2020-12-16	65 and Older	180273	4243
2020-12-16	Missing	1252	15

Data Exploration

Date	Age Group	(Positive Cases) / (Age Group Population)	(New Cases by Age) / (Total New Cases)
2020-04-02	0-17	0.00001	0.011258
2020-04-02	18-49	0.00030	0.495364
2020-04-02	50-64	0.00040	0.268874
2020-04-02	65 and Older	0.00040	0.218543
2020-04-02	Missing	N/A.	0.005298

Date	Age Group	(Positive Cases) / (Age Group Population)	(New Cases by Age) / (Total New Cases)
2020-12-16	0-17	0.02305	0.127304
2020-12-16	18-49	0.05999	0.573052
2020-12-16	50-64	0.04566	0.195821
2020-12-16	65 and Older	0.03090	0.103458
2020-12-16	Missing	N/A	0.000366

Q: Is the positive cases for each age group in California a sample of the positive cases for each age group in the United States?

After careful analysis, no, positive cases for each age group California is not a sample of the positive cases for each age group in the US.

Age Group	Observed Cases in California	Expected Cases in California
0-17	208045	181748
18-49	1043558	960402
50-64	331246	359721
65 and Older	180273	252994
Missing	1252	9528

Conclusion

Although efforts to mitigate the spread of Covid-19 have had some effect on slowing down the spread of Covid-19 have been somewhat successful (e.g. stay-at-home orders, slowly reopening the public and closing it down when things got worse), there still needs to be some effort in enforcing the stay-at-home orders and something in affect to help those who were impacted by Covid-19 financially (e.g. laid off, hours cut, etc.), especially people of the ages 18-49. Additionally, there was no indication that the positive cases for each group in California is not a sample of the positive cases for each age group in the United States.

References

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