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US needs to mitigate the resurged COVID-19 pandemic by the best policy

- [Yoshiyasu Takefuji](#), Professor, Keio University

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#### ABSTRACT

The resurgence of the number of daily deaths can be observed in the US. Predictions were conducted by changing the dataset size based on the state-of-the-art curve fitting. The result shows the strong resurgence of the pandemic in the near future.

#### RATIONALE

According to Our World in data (1), the strong resurgence of the number of daily deaths can be observed in the US as shown in Fig. 1 with X-axis from Dec.31 in 2019 to Nov.20 in 2020 and y-axis (the number of daily deaths).

<https://github.com/ytakefuji/US/blob/main/us.gif>

In Fig.1, black line shows the number of daily deaths in the US due to the COVID-19. Blue line indicates the number of predicted daily deaths using the last 245 days from Nov.20 in 2020 based on the state-of-the-art 10th degree polynomial curve fitting. Red line depicts the number of predicted daily deaths by changing the dataset size from 125 to 245 days.

Data was downloaded from the following site:

[https://covid.ourworldindata.org/data/ecdc/new\\_deaths.csv](https://covid.ourworldindata.org/data/ecdc/new_deaths.csv)

Python program `animedaily.py` can generate png image files for creating a `us.gif` file. The program is available based on the acceptance of this paper.

Fig.1 implies the strong resurgence of the pandemic in the US. US needs to mitigate the pandemic by implementing the best policy using the real-time digital surveillance of isolating suspected patients and patients from uninfected individuals.

Many nations use the similar digital surveillance using coronavirus Apps (2). However, the significant difference of digital surveillance fences lies in the reliability and the coverage (2). Taiwan has over than 99% coverage while the US's coverage is far from perfect (2). Taiwan is tracking 55,000 people under a mandatory 14-day home quarantine in real time. The effectiveness is justified by the consequence of Taiwan where Taiwan has only seven deaths due to the COVID-19 with a population of 23.8 million.

#### References:

1. Our world in data, [https://covid.ourworldindata.org/data/ecdc/new\\_deaths.csv](https://covid.ourworldindata.org/data/ecdc/new_deaths.csv)

2. Coronavirus-Apps (2020). Regulating Electronic Means to Fight the Spread of COVID-19

<https://www.loc.gov/law/help/coronavirus-apps/coronavirus-apps.pdf>

