## Deciphering the Temporal Patterns of COVID-19: A Comprehensive Analysis of Case Rates in England\*

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## 1 Introduction

## 2 Data

Table 1: Raw Data Preview

| yeaproduatlexplyBAANKakkexpsGDPdnAdhdadossCDRevoltopedopinGDHNVSACRZycaplydon herf |  |   |                     |   |   |
|--|--|---|---------------------|---|---|
| 198 <b>0</b> 1111095 <b>TV42</b> .60   | 0.05 <b>45605</b> 00 <b>00</b> 00000   | 0 | 7550. <b>7</b> 58 0 | 0 | 4.15 D <b>7635242304662</b> 5.1 <b>7</b> .011.333.497       |
| 198 <b>3</b> 1111053351.40   | 0.03 <b>8507</b> 400 <b>00</b> 00000   | 0 | 7014.034 0          | 0 | - 0.07 <b>524254662</b> 5.1 <b>7</b> .011.333.497           |
| 0.0394564  |  |   |                     |   | 5.689528  |
| 198 <b>3</b> 111852470.1 0   | 0.01 <b>82383</b> 6596 0 0             | 0 | 6565. <b>6</b> 87 0 | 0 | - 0.07 <b>5242504662</b> 5.1 <b>7</b> .011.333 <b>3</b> 497 |
| $0.2115936 \qquad 0.0075669$   |  |   |                     |   | 4.957179  |
| 198 <b>3</b> 11 <b>1</b> 644636.7 0  | 0.01132745216302105                    | 0 | 6716. <b>9</b> 34 0 | 0 | 3.87 <b>5103524254662</b> 5.1 <b>7</b> .011.333.497         |
| 0.2794514  |  |   |                     |   |   |
| 198 <b>3</b> 111448148.1 0   | 0.01 <b>62829009916</b> 000            | 0 | 6762.081 0          | 0 | 2.21 <b>07735242504662</b> 5.1 <b>7</b> .011.3338497        |
| 0.3635626  |  |   |                     |   |   |
| 198 <b>3</b> 111424815.2 0   | 0.01 <b>%123322454</b> 9 <b>9</b> 401) | 0 | 6156 <b>.0</b> 71 0 | 1 | - 0.07 <b>524254662</b> 5.1 <b>7</b> .011.3 <b>33</b> .497  |
| 0.0534697  |  |   |                     |   | 7.586677  |

<sup>\*</sup>Code and data are available at: https://github.com/Yusuf365/Data-Analysis-Regression.git

## 3 Model

Data used in this paper was cleaned, processed, modeled and tested with the programming language R (citeR?). Also with support of additional packages in R: tidyverse (citeTidyverse?), ggplot2 (citeGgplot?), janitor (citeJanitor?), readr (citeReadr?), knitr (citeKnitr?), modelsummary (citeModelsummary?), testthat (citeTestthat?), KableExtra (citeKableEx?), viridis (citeViridis?), lubridate (citeLubridate?).

- 4 Results
- 5 Discussion
- 6 Conclusion
- 7 References