

International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)

Volume 2, Issue 6, May 2022

Covid-19 Analysis and Future Forecasting

Aditi Vadhavkar¹, Pratiksha Thombare², Utkarsha Auti³, Priyanka Bhalerao⁴, Prof. Sagar Dhanake⁵

Students, Computer Engineering^{1, 2, 3,,} Assistant Professor, Computer Engineering⁵ D Y Patil Institute of Engineering and Technology, Ambi, Pune, Maharashtra, India

Abstract: Forecasting Mechanisms such as Machine Learning (ML) models have been demonstrating their value in predicting perioperative outcomes in the domain of future course of action decision making. Many application domains have seen the usage of machine learning models for identification and prediction. A threat's unfavourable factors are prioritised COVID-19 has proven to be a serious hazard to humans. A worldwide pandemic has been declared by mankind. Many assets around the world have had problems. This sickness has a high infectivity and contagiousness. Take a look at the diagram of undermining elements. We used four Machine Learning Models in COVID-19: Linear Regression (LR), Support vector machine (SVM) and Bayesian Ridge. The results show that of the four models used in this work, the LR performs the best, followed by the Bayesian and SVM, which both perform well in forecasting newly confirmed cases, death rates, and recovery rates.

Keywords: COVID-19, Supervised Machine Learning, Forecasting, Machine Learning

REFERENCES

- [1]. G. Bontempi, S. B. Taieb, and Y.-A. Le Borgne, "Machine learning strategies for time series forecasting," in Proc. Eur. Bus. Intell. Summer School. Berlin, Germany: Springer, 2012, pp. 62–77.
- [2]. F. E. Harrell Jr, K. L. Lee, D. B. Matchar, and T. A. Reichert, "Regression models for prognostic prediction: Advantages, problems, and suggested solutions," Cancer Treat. Rep., vol. 69, no. 10, pp. 1071–1077, 1985
- [3]. P. Lapuerta, S. P. Azen, and L. Labree, "Use of neural networks in predicting the risk of coronary artery disease," Comput. Biomed. Res., vol. 28, no. 1, pp. 38–52, Feb. 1995.
- [4]. K. M. Anderson, P. M. Odell, P. W. Wilson, and W. B. Kannel, "cardiovascular disease risk profiles," Amer. heart J., vol. 121, no. 1, pp. 293–298, 1991.
- [5]. F. Petropoulos and S. Makridakis, "Forecasting the novel coronavirus COVID 19," PLoS ONE, vol. 15, no. 3, Mar. 2020, Art. no. e0231236.
- [6]. G. Grasselli, A. Pesenti, and M. Cecconi, "Critical care utilization for the COVID-19 outbreak in lombardy, italy: Early experience and forecast during an emergency response," JAMA, vol. 323, no. 16, p. 1545, Apr. 2020.
- [7]. WHO. Naming the Corona virus Disease (Covid-19) and the Virus That Causes it. Accessed: Apr. 1, 2020. [Online]. Available: https:// www.who.int/emergencies/diseases/novel coronavirus-2019/technic% alguidance/ naming-the-coronavirus-disease-(covid-2019)- and-the-virusthat-cau%ses-it
- [8]. C. P. E. R. E. Novel, "The epidemiological characteristics of an outbreak of 2019 novel coronavirus diseases (Covid-19) in China," Zhonghua Liu Xing Bing XueZaZhi= Zhong hua Liuxingb in gxueZazhi, vol. 41, no. 2, p. 145, 2020.
- [9]. M. R. M. Talabis, R. McPherson, I. Miyamoto, J. L. Martin, and D. Kaye, "Analytics defined," in Information Security Analytics, M. R. M. Talabis, R. McPherson, I. Miyamoto, J. L. Martin, and D. Kaye, Eds. Boston, MA, USA: Syngress, 2015, pp. 1–12. [Online]. Available: http://www.sciencedirect.com/science/article/pii/ B9780128002070000010.