

COVID-19 Third Wave Prediction

1)AI-powered Algorithm released to detect the third wave in South Africa(News Article)

11 April 2021

Paper link - <https://www.wits.ac.za/news/latest-news/research-news/2021/2021-03/ai-powered-algorithm-released-to-detect-the-third-wave-in-south-africa.html>

Dashboard link- <https://www.covid19sa.org/riskindex>

Two independent algorithms used here:

1. **SI Model**
2. **RNN (LSTM)**

Both of these algorithms work independently and are updated on a daily basis. The existence of two independent algorithms adds robustness to the predictive capacity of the algorithms.

2)A third wave is imminent - can AI predict when?

Paper link :<https://indiaai.gov.in/article/a-third-wave-is-imminent-can-ai-predict-when>

- **The SARS Effect on Data Driven Approaches to COVID19 Management**

They used the Susceptible Exposed Infectious Removed (SEIR) model to derive the curve of the epidemic.

An AI model, trained on SARS data(2003-04), was used to then predict how the epidemic would forge its path ahead.

3)COVID-19 Outbreak in India by IIT Kanpur

Paper link -<https://www.iitk.ac.in/new/covid-19-outbreak-in-india>

SIR - Covid-19 Prediction Model - <https://covid19-forecast.org/>

using SIR model, they have constructed some scenarios of possible third wave using the epidemic parameters of the second wave.

SI Model Short Implementation - <https://stackoverflow.com/questions/47366712/correct-implementation-of-si-sis-sir-models-python>

Class Methods - <https://ndlib.readthedocs.io/en/latest/reference/models/epidemics/Slm.html>