COVID-19: REDUCING CALL CENTER LOAD THROUGH INTELLIGENT VIRTUAL BOT AND FORECASTING SPREAD

Shreejaya Bharathan, Stephanie Jung, Hannah Lyon, Aakanksha Nallabothula, Ivette Sulca

01

THE NEED:

Right now, health call centers are inundated with phone calls,.

THE DOH RECIEVES ABOUT 1 CALL PER MINUTE

WASHINGTON STATE ALONE RECEIVES 420 CALLS PER HOUR

02

THE SOLUTION:

AN INTELLIGENT VIRTUAL BOT THAT CAN HANDLE QUESTION VOLUME.

HOW THE BOT WORKS IS BY DETECTING THE INTENT OF A USER'S QUESTION AND RESPOND WITH INFORMATION STRAIGHT FROM THE CDC OR WHO

DATA:

TWEETS SCRAPED THROUGH THE TWITTER API

OUR OWN DATASET OF COVID-19 QUESTIONS

MODEL:

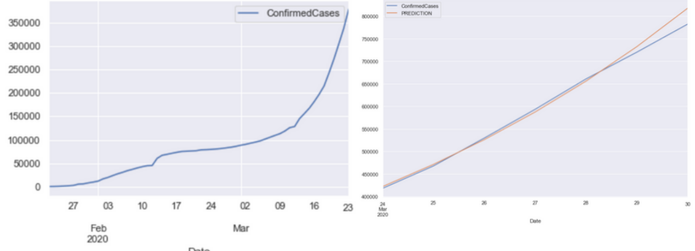
Model	Accuracy
Random Forest	0.77
Ridge Regression	0.89
Naive Bayes	0.76
Logistic Regression	0.79
KNN	0.84

03

FORECASTING:

To analyze need for our virtual bot, we used a multiplicative double exponential smoothing model to forecast COVID-19 cases

RMSE = 478207.46



Code reference : uncoolai.com/exponential-smoothing-for-time-series-forecasting/