

PREDICTIVE MEASURES FOR MITIGATION OF COVID-19 COMMUNITY TRANSMISSION

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1. INTRODUCTION

1.1 BACKGROUND

Coronaviruses are family of viruses that cause diseases generally in birds and animals, which in some cases get transmitted to humans, like the one the whole world is currently facing. COVID-19 or Coronavirus Disease 19 is the name WHO (World Health Organization) coined for this new disease which as of 26 April 2020, consumed at least 203,705 lives and more than 2,935,876 confirmed cases. It causes respiratory tract infections that can range from mild to lethal. India being world's second most populous country with its high population density was at high risk if the contagion spread. A pre-emptive 21 days lockdown and then extended 19 days lockdown indeed helped in containing the rate of spread of the virus. IMA (Indian Medical Association) & ICMR (Indian Council of Medical Research) have been on their feet even before the first case was recorded in India, still as we speak there are at least 27.3k active cases and as many as 825 deaths and we are only in 2nd Stage of Transmission. To tackle this unprecedented situation, there were multiple novel techniques devised and used, therefore, it is imperative to estimate the existing cluster of cases in the country, investigate the treatment, recovery and deaths in those areas and to explore if there are any predictions can be made for new Quarantine and isolation facilities. A large number of daily wage workers suddenly boggled by this situation find them without food and shelter. We'll also try and predict the areas where migrant workers might take food and shelter while maintaining social distancing.

1.2 PROBLEM

The world has come to a halt amid COVID-19. All economic machineries have come to a standstill and the liquidity in market has dried out. Hence, the breakage of transmission chain and release in economic activity is one following the other. Hence, this project aims at predicting probable locations that can be used as quarantine facilities, food shelters and even testing facilities.

1.3 INTEREST

Every government in the world, every CEO of every company, every worker either daily-wage or salaried, every front-line COVID worker is interested in finding some way that can break the existing transmission chain and slowly the world returns to normalcy. Hence, a large number of people are stake holders in this.

2. DATA ACQUISITION AND CLEANING

2.1. DATA SOURCES

2.2. DATA PRE-PROCESSING