

WashKaro:

An AI Powered Infodemic Management App

Karo(Hindi) \v: Do It

Hello!

I am Tavpritesh Sethi (Tav)
Clinician Data-Scientist
Assistant Professor (CB), IIIT-Delhi
 @Tavpritesh



Right Information to the Right People in the Right Format at the Right Time.



Wash KARO



Health Topics ▾

Countries ▾

Newsroom ▾

Emergencies ▾

About Us ▾

Coronavirus disease (COVID-19) technical guidance: Infection prevention and control / WASH

◀ Coronavirus disease 2019

◀ Technical guidance

Infection prevention and control

Unity Studies: Early
Investigation Protocols

Infection prevention and control during health care when novel coronavirus (nCoV) infection is suspected

This is the first edition of guidance on infection prevention and control (IPC) strategies for use when infection with a novel coronavirus (2019-nCoV) is suspected. It has been adapted from *WHO's Infection prevention and control during health care for probable or confirmed cases of Middle East respiratory syndrome coronavirus (MERS-CoV)* infection, based on current knowledge of the situation in China and other countries where cases were identified and experiences with severe acute respiratory syndrome (SARS)-CoV and MERS-CoV.

[- Access the publication](#)

A Machine Learning Application for Raising WASH Awareness in the Times of Covid-19 Pandemic

Rohan Pandey^{1#}, Vaibhav Gautam^{1#}, Kanav Bhagat^{2#}, Tavpritesh Sethi^{2*}
#equal contribution

¹Shiv Nadar University, Noida, UP, India

²Indraprastha Institute of Information Technology, Delhi, India
*tavpriteshsethi@iiitd.ac.in

Abstract

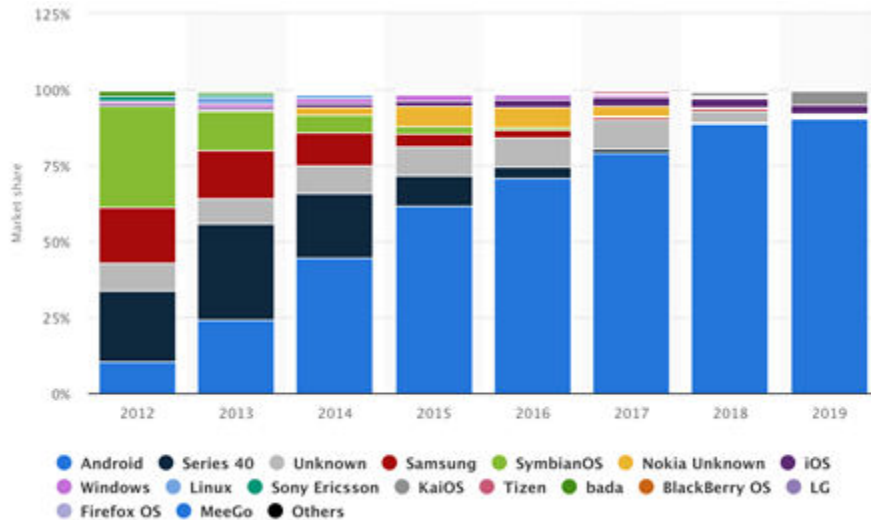
A proactive approach to raise awareness while preventing misinformation is a modern-day challenge in all domains including healthcare. Such awareness and sensitization approaches to prevention and containment are important components of a strong healthcare system, especially in the times of outbreaks such as the ongoing Covid-19 pandemic. However, there is a fine balance between continuous awareness-raising by providing new information and the risk of misinformation. In this work, we address this gap by creating a life-long learning application that delivers authentic information

1 Introduction

Raising healthcare awareness for primary prevention of diseases is a challenge all across the globe. Hygiene promotion is the most cost-effective health intervention if accurate content is delivered effectively. A majority of preventable diseases result from unhygienic practices. Water, Sanitation and Hygiene (WASH) measures such as hand-washing are also important in limiting the spread of pandemics such as the currently raging Covid-19. Further, the awareness raising content is often not available to those who need it the most and in a format that they easily understand leading to profoundly wide socio-economic impacts of this lack. In 2017, around 55% of the global population did not make use of a safely managed sanitation service effected in part due to lack of awareness in addition to the lack of facilities at home[2].

<https://arxiv.org/pdf/2003.07074.pdf>

Android App



<https://www.statista.com/statistics/262157/market-share-held-by-mobile-operating-systems-in-india/>

WHO Consultation on Infodemic Management, April 8, 2020

USER FLOW DIAGRAM

Gets feed of news articles fetched from different news sources

Gets an option to play the audio of the article and read it in Hindi

On clicking the toggle button, user is served a relevant WHO Guideline

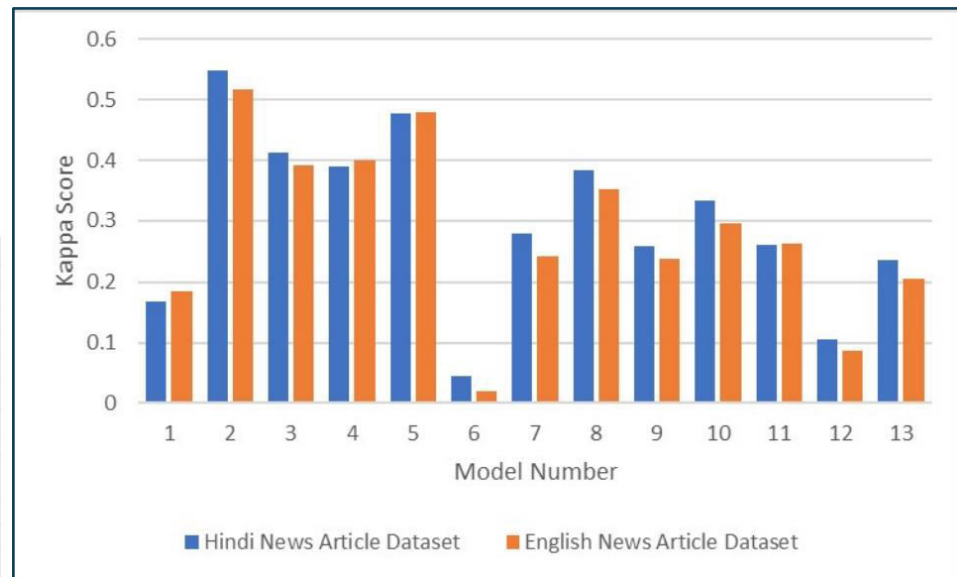
User can mark the guideline presented as relevant or irrelevant

1. Human AI Collaboration
2. Extractive Text Summarization– Text Rank Method
3. Word2Vec with Smooth Inverse Frequency Models
4. Matching– Similarity Scores and Human Concordance
5. Google Translate and Text to Speech Deliver Content

Human Evaluation

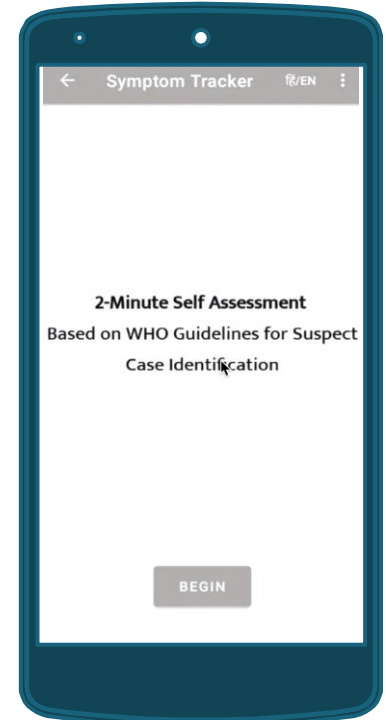
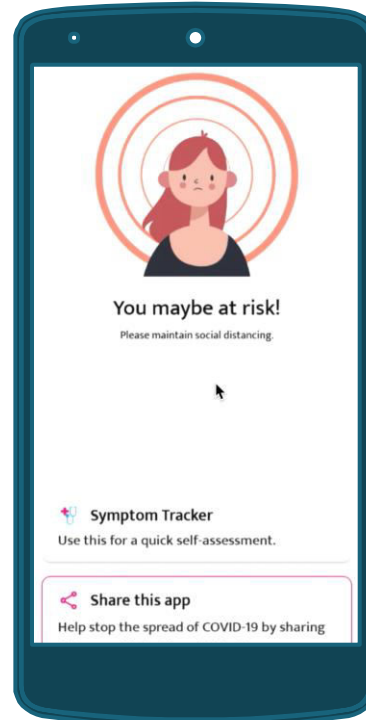
- 2500 News- WHO Pairs by 8 Humans
- 13 different model combinations

Model	Embedding	Preprocessing	TF-IDF	Similarity Metric
1	Word2Vec	X	X	Cosine
2	Word2Vec	✓	X	Cosine
3	Word2Vec	X	✓	Cosine
4	Word2Vec	✓	✓	Cosine
5	Word2Vec	X	X	Word Mover Distance
6	Word2Vec	✓	X	Word Mover Distance
7	Glove	X	X	Cosine
8	Glove	✓	X	Cosine
9	Glove	X	✓	Cosine
10	Glove	✓	✓	Cosine
11	Glove	X	X	Word Mover Distance
12	Glove	✓	X	Word Mover Distance
13	Google Sentence Encoder	X	X	Cosine



Information Suite

- Learning AI
- Bluetooth based Contact Tracer
- Symptom Tracker and Chatbots- WHO
- Myth-busters



THANKS!

Any questions?

You can find me on Twitter @tavpritesh
& Email: tavpriteshsethi@iiitd.ac.in



Credits

