



Battle Against COVID-19: Innovative Solutions by IIIT Delhi giving India an Edge in the Fight Against the Virus

New Delhi: As one of the leading institutions in the country and a beacon of knowledge, IIIT Delhi is contributing in the battle against COVID-19 by innovating unique ideas and solutions. The institute has come up with several strategies in a short interval of time to raise awareness among the people regarding the Coronavirus and has furnished tools that can help them maintain a safe distance from the disease.

One such solution is the WashKaro app. Currently available for Android users (iOS version under development), the app functions as a complete Infodemic Management Suite. For this reason, it was also presented at WHO, Geneva on 8th April, via video conferencing.

WashKaro aims to provide the right information to the right people in the right format at the right time. It is targeted at the layman and the daily updated content is delivered in Hindi as bite-sized audios for those who may not be able to read. The app delivers government advisories from official pages and contains a Symptom Tracker (based upon WHO) for people to know if they are safe.

It also houses CovidTracer, which is a breakthrough technology that tells people if their safety is compromised because they're close to someone COVID-19 positive. It's a peer-to-peer network and uses Bluetooth technology for communication. It doesn't need internet or location services and no data is stored anywhere on any server.

onAIr is perhaps one of the most brilliant features of the app. It makes use of the Artificial Intelligence technology to cross-reference news with WHO documents. This ensures that people are shielded from fake information and hoaxes. Besides that, the app has abundant information regarding the pandemic and therefore serves as a conduit of verified information compared to other social media sources.

"I have been focusing on the marriage of medicine and artificial intelligence because of my training in both. Wrong information about COVID spreads faster than the disease itself. So we focused on stopping this with AI and medical expertise working together. WashKaro is the first AI-powered Infodemic Management App that provides a suite of tools to keep users safe at all times by providing authentic audios in hindi, bluetooth based physical distancing, and self tracking," commented Dr. Tavpritesh Sethi, a ClinicianDataScientist and an Assistant Professor of Computational Biology at IIIT Delhi.

"I have been working on fake news and misinformation for a while now, and my broad theme of research is 'Saving Lives'. The current Covid-19 situation demanded a multi-

disciplinary approach. WashKaro is a very satisfying collaboration of Medicine and Computing and IIITD is well known for building AI and machine learning based systems that are widely used.” said Prof Ponnurangam Kumaraguru, Professor of Computer Science and Dean of Students Affairs at IIIT-Delhi.

Besides the app, the institute has also developed a website by the name CoronaActionIndia, which is an updated website aggregating all the government advisories and vetted information along with a dashboard for ease of access.

Another positive initiative has been the development of Patient Management and Tracking Tools. Given the increasing number of patients every day, it can be very helpful to have an organized online ledger that can track and monitor the affected individuals. It will help maintain a publicly available repository of guidelines, algorithms and calculators for patient management, which have been sourced from trusted sources like WHO, public advisories from ICMR and reputed institutions such as AIIMS, New Delhi.

IIITD is known for its multidisciplinary research, and these initiatives have been a result of the collaboration between two professors from different fields – one from Computational Biology and the other from Computer Science. Students and Researchers working on the projects have been crowdsourced; students are from AIIMS, IIITD, and even employees of other organizations are contributing to the efforts.