Why do we need CovidHub?

The COVID-19 epidemic has led to isolation measures being implemented by governments all around the world in order to contain this virus. Chief among these measures, is a quarantine, which involves physically isolating yourself in your home, away from the outside world. But what if you accept delivery of a package that potentially has COVID-19 residue on its packaging? Or you order takeout and the container potentially transfers COVID-19 to your dining table? Any of these potentially drastic situations could result in exposure to the virus, leading to possibly being infected with it. Furthermore, there is rampant misinformation that is being spread regarding the pandemic, from supposed “home remedies” that can help boost immunity from the virus to “vaccines” that can kill the virus. This creates significant hurdles for the end user, as it makes it difficult for them to get reliable information about the virus, leading to accidental transmission and infection.

We conceived CovidHub in response to these concerns. CovidHub is a web dashboard, designed to be the one stop solution for all your COVID-19 concerns. It features an interactive ChatBot, and a seamlessly integrated object recognition model which uses the power of the IBM Cloud and Watson AI in order to answer your queries.

Our novel approach is built on the values of reliability and speed. A common trend exhibited by the information available online was that it consisted of long paragraphs, requiring a significant time investment on the user’s behalf. We believe that the end user should not have to peruse through large paragraphs about the virus to get to the information they need. Thus, we decided that a dashboard was the best way to surface concise information to our users. Furthermore, in order to present this information in the most friendly way, we built a chatbot on the IBM Cloud, so the experience feels more conversational, interactive and engaging than a static website. We used Watson Discovery to get reliable, relevant, up-to-date information about the virus and integrated Watson Assistant in order to provide a seamless experience when conversing with the bot. For our flagship feature, we build a custom object recogniser model using the Watson Visual Recogniser API that could identify common surfaces such as wood, paper and cardboard and give the user important insights such as the lifetime of the virus on this surface and the best methods to disinfect the identified surface. We chose to use this API as it allowed us to fully train our model in the least time possible with the least amount of data required.

Our next steps for this platform are to broaden the range of offerings. We have a number of potential features in the pipeline, such as enabling multi-surface detection in an image and allowing users to upload files directly, rather than by link. We are also exploring building standalone clients for mobile platforms, such as Android and iOS that can complement the web experience.