

AI vs COVID-19 Ideation Challenge

Summary of 10 winning proposals

PROPOSAL TITLE	SUMMARY	SUBMITTED BY	NAME OF INSTITUTION
Crowd Avider	An application with the help of AI, which has a similar purpose to the website Space Out, to inform users of crowded places so that they are able to avoid these crowded spaces. The application will register the user and track their location and upload it to the database where no personal information is collected, only details of a person being at the location is saved. As more users start to use the application, the application would help users avoid crowd. Users will be able to be updated with the latest updates on the crowd levels anywhere in Singapore. The application can also help users to plan a route to travel to their destination while attempting to avoid any huge crowd as far as possible.	Koh Tat Yao	Dunman High
COVID - Contain Outbreak through Video Identification and Detection	The proposal involves facial recognition combined with face grouping (tagging), machine learning (ML) & data analytics. As the number of COVID cases grow & as each infected person is tagged in the videos, the AI can then make cross references if any of the cases are related. If the persons were tagged together within a frame of the video (grouping), the	Muhammad Khair B Abdul Rahim,	ITE, College Central
		Muhammad Hady Nawfal B Norhizam,	
		Muhammad Haziq B Mohamed Zuffri,	

	<p>connection between cases can be quickly established. With the use of ML, it will help to determine the likelihood of infection. Once the grouped cases are identified, the AI will measure out the proximity, interaction level & duration of contact from the videos. These data will be analysed & will act as supervised data for ML. As it learns, the AI can then accord different levels of risk factors to the persons around the infected.</p>	<p>Muhammad Irfan B Johani</p>	<p>ITE, College Central</p>
<p>Covid-19 Data-driven Readiness and Risk Evaluator</p>	<p>A one-stop source of data dashboard with sentiment or outlook score which represent each country's risk, readiness and forecast. This proposal will helps to improve the effectiveness of data-driven decisions which will lead to increased reliability, reactivity/relevance and making artificial-powered decisions for reference and consideration.</p>	<p>Leow Cong Sheng</p>	<p>NTU</p>

<p>Improving Healthcare Efficiency</p>	<p>The proposal involves the use of an AI diagnostic machine. Patients will be required to key in the symptoms they are experiencing and scan their fingerprints keying in their symptoms. Using the information entered by the patient and the recorded vital signs, the machine can provide a diagnosis and dispense medication accordingly. Should there be a need for further diagnosis, a pharmacist will be alerted. After every diagnosis, the information will be recorded in the database. This will help to decrease the amount of manpower required as well as reduce face to face contact. With the decrease in manpower needed at the screening counter, more staff would be reallocated to take care of patients who require closer monitoring.</p>	<p>Bryan Sim, Verity Lim, Matthias Loong, Dylan Koh</p>	<p>Temasek Poly</p>
<p>Mentality</p>	<p>A mobile app, connected to a smart watch, would aid psychiatrists diagnose, track user mental well-being and cope with their problems. With the use of ML, it helps to analyse user speech, heart rate and sleeping patterns to gauge user's current mental state and diagnosis. This could be an effective way for clinicians in utilising the little time they have with patients as diagnoses could be done quicker and accurately, allowing them to receive the right course of treatment faster. Moreover, it reduces the strain in the lack of accredited volunteers and professionals. The proposed solution is not only applicable during the pandemic and post pandemic cases - when things return to normal but also when another crisis occurs, adding flexibility to it.</p>	<p>Rose Evangeline Anne Dagman Destor</p>	<p>Dunman High</p>

Customised Teaching Assistant	<p>A digital teaching assistant that is customised to the progress of each student. Students need to take a quiz on a regular basis to check their knowledge of the topics. From these quizzes, scores which determine their knowledge will be automatically computed for each student. Depending on their scores, the teaching assistant will share the score with the students and prompt them for further readings.</p>	Huang Xiaoling	SMU
Bamboo: An app for HBL	<p>A learning app that allows students to learn with the same efficiency in school. This app will include different quizzes and tests that escalate in difficulty as the student understands these concepts better. Information on the progress of the students can help teachers organise their lessons that are more tailored to each student's standards. Through this app, students learn to be more independent in their learning and it will encourage more HBL as students reduce their time needed for travel so they would not need to spend long periods of time in school and still learn the same amount of content per day or even more.</p>	Leow Yi Yang	Hwa Chong Institution

Personalized AI Job Portal for Job Seekers	<p>An Online Portal for job seekers with an AI back-end which can use the information provided by an individual e.g. Educational Level, Personality Trait from a test (DISC, Workplace Behaviour Factors, etc.), and personal preferences such as type of working environment/job to generate smart suggestions. The portal could also be linked to the SGUnited traineeships portal on mycareersfuture.sg, to help match job seekers to a suitable opportunity.</p>	Ang Song Gee	SUTD
Food Recipe and Grocery List Organizing using AI Image Recognition	<p>An application that uses AI to come up with a default grocery shopping template for that user based on the past snapped receipts and has image recognition to identify ingredients. The application will recommend recipes based on the current ingredients you have, makes it easier to generate a shopping list, ensures that users are buying the right amount of ingredients and in turn reduces food wastage by ensuring that you do not purchase duplicate ingredients.</p>	Elijah Chia, Eugene Foo, Ryan Ho	Nanyang Poly

Fast Delivery	An application could be developed to serve cross platforms and cross delivery platforms. It will be powered by an AI algorithm to find the best match. This would help retailers to find delivery companies with extra capacity to deliver their goods to the customers in the shortest time possible. The app would also allow retailers to review the performance of the delivery companies so that they can choose the best possible options to have their goods delivered.	Ang Jyan Yue, Ang Hong Li	Temasek Secondary, Hwa Chong Institution
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