



Media Release

COVID-19 Resilience Technology Solutions From Singapore

SMU submits two projects to the 2020 Paris Peace Forum for showcase

Singapore, 20 July 2020 (Monday) – With the rapid spread of the pandemic which has infected more than 14 million globally to date, the world is grappling with control measures to stop the virus from further proliferation.

Since 2018, the [Paris Peace Forum \(PPF\)](#) has brought together Heads of State, Government and international organizations with civil society and the private sector together to conceive new forms of collective action for global challenges. The third edition in 2020 themed “Bouncing back to a better world” will focus on projects and initiatives aimed at addressing COVID-19 and improving collective resilience of the world population.

Taking place in November 2020, international projects shortlisted by the PPF’s Selection Committee which comprises renowned experts from key institutions of global governance will receive support for upscaling along four dimensions, namely policy and advocacy; communication and visibility; partnerships and funding; and organisation.

[The Singapore Management University \(SMU\)](#) has responded to its [Call for Projects](#) with research initiatives currently undertaken by the SMU School of Law’s [Centre for AI and Data Governance \(CAIDG\)](#) and the [School of Information Systems \(SIS\)](#). These projects leverage the development of intelligent technology to improve social distancing measures and identification of vulnerable populations, which may be challenging to manage using physical human means.

Project by SMU Centre for AI and Data Governance

CAIDG’s research focuses on post pandemic eldercare. Using AI and big data innovation, it will provide a diagnostic risk modelling tool which helps predict population vulnerability for the elderly, especially in low and middle income countries.

“A feature of the failings in this recent pandemic healthcare has been the incapacity to adequately predict risk populations early enough for preventive strategies to be successfully directed toward their particular needs. In developed nations, migrant workers housed in confined conditions, and older people in institutional settings present examples of vulnerability where standard control responses such as social distancing have not been available due to realities of living conditions,” says **Professor [Mark Findlay](#), Professorial Research Fellow and Director, CAIDG, SMU School of Law.**

“Whether it be in tracking/tracing strategies or containment surveillance, AI-assisted surveillance technologies and big data sharing have been key in the responses of China, Singapore and many developed nation states. The capacity of these technologies can be debated and the challenges they pose to personal data integrity and civil liberties questioned but combined with human-centred control through mass testing and manual tracing, AI-assisted technologies give benefit in a holistic control response.” he added.

Through selection, adaptation, testing and evaluation of AI-assisted technologies, the diagnostic tool would be able to identify structural and demographic factors that contribute to the pandemic. Accordingly, risk strategies such as quarantines and incubation can then be devised towards containment.

The exercise will pilot in India and will thereafter be rolled out to other countries at later stages. CAIDG will be collaborating with the Centre for Internet and Society in Bangalore, and the Advanced Care Research Centre at the University of Edinburgh.

Project by SMU School of Information Systems

The second project submission is the [Singapore Spacer](#), a collaborative effort between SMU’s School of Information Systems and the National University of Singapore (NUS), and supported by private companies including Aviation Virtual, ESRI and SenzIQ. The tool makes use of Wifi networks to accumulate information on the density of people in areas without disrupting living routines. Data collected allows the owners of facilities and public spaces to make principled choices about what actions to take to reduce the likelihood of person to person COVID-19 transmission. Policies to limit community spread can also be evaluated on their effectiveness based on this information. The Singapore Spacer system went live in April at the NUS campus.

“We believe that social distancing will remain a challenge for the next few years that every country will need to grapple with. Even after an effective vaccine has been found, we suspect safe social distancing policies will still continue to be in place for various reasons. Our ultimate goal is to provide a holistic solution that can be used across any campus and public space to help improve the safety and well-being of the users of those spaces.” said **Professor [Rajesh Krishna Balan](#), Associate Professor of Information Systems, SMU.**

About [SMU Centre for AI and Data Governance](#)

Established in September 2018 at the Singapore Management University School of Law, the Centre for AI & Data Governance (CAIDG) conducts independent research on policy, regulatory, governance, ethics and other issues relating to AI and data use. The Centre is supported by the National Research Foundation and the Infocomm Media Development Authority of Singapore, and forms part of the national ecosystem driving the development of responsible AI in Singapore.

The Centre has three goals, namely conduct academic research to inform AI and data governance in Singapore and beyond, with a particular focus on legislation and policy; convene and facilitate dialogue across academia and industry, especially between organisations in the Asia Pacific region; and share its research and learn from other organisations and the wider public.

About [SMU School of Information Systems](#)

Real-world industry sectors provide our School of Information Systems (SIS) with a testbed and laboratory for experimentation, as well as a fertile breeding ground for new ideas. Our faculty and students apply their research results to solve real problems in a variety of industry settings and to create IT applications and systems. At the same time, our faculty actively publish in top-quality Computer Science and Management Science conferences and journals. Our research areas include Cybersecurity; Data Management & Analytics; Human-Machine Interaction; Information Systems Management; Intelligent Systems & Optimization; Machine Learning & Intelligence; Multimedia; Sensing, Sense-Making & Activation; Software Engineering & Systems.

SIS offers a suite of degree programmes. Our B.Sc. (Information Systems), B.Sc. (Computer Science) and B.Sc. (Computing & Law) have been remarkably successful in demonstrating educational innovations and creating a culture of learning, establishing external linkages and partnerships with industry, government and the social sector, and with job placement. We run a highly ranked Master of IT in Business degree, with specializations in Analytics; Artificial Intelligence; and Financial Technology & Analytics. Our doctoral degrees, including Ph.D. (Computer Science), Ph.D. (Information Systems) and Doctor of Engineering, have produced graduates who joined highly sought organizations in academia and industry.

About [National University of Singapore \(NUS\)](#)

The National University of Singapore (NUS) is Singapore's flagship university, which offers a global approach to education, research and entrepreneurship, with a focus on Asian perspectives and expertise. We have 17 faculties across three campuses in Singapore, as well as 12 NUS Overseas Colleges across the world. Close to 40,000 students from 100 countries enrich our vibrant and diverse campus community. Our multidisciplinary and real-world approach to education, research and entrepreneurship enables us to work closely with industry, governments and academia to address crucial and complex issues relevant to Asia and the world. Researchers in our faculties, 29 university level research institutes, research centres of excellence and corporate labs focus on themes that include energy, environmental and urban sustainability; treatment and prevention of diseases common among Asians; active ageing; advanced materials; as well as risk management and resilience of financial systems. Our latest research focus is on the use of data science, operations research and cybersecurity to support Singapore's Smart Nation initiative. www.nus.edu.sg

About [Singapore Management University \(SMU\)](#)

A premier university in Asia, the Singapore Management University (SMU) is internationally recognised for its world-class research and distinguished teaching. Established in 2000, SMU's mission is to generate leading-edge research with global impact and to produce broad-based, creative and entrepreneurial leaders for the knowledge-based economy. SMU's education is known for its highly interactive, collaborative and project-based approach to learning.

Home to over 10,000 students across undergraduate, postgraduate professional and postgraduate research programmes, SMU is comprised of six schools: School of Accountancy, Lee Kong Chian School of Business, School of Economics, School of Information Systems, School of Law, and School of Social Sciences. SMU offers a wide range of bachelors', masters' and PhD degree programmes in the disciplinary areas associated with the six schools, as well as in interdisciplinary combinations of these areas.

SMU has an emphasis on generating rigorous, high-impact, and relevant multi-disciplinary research that addresses Asian issues of global relevance. SMU's faculty members collaborate with leading international researchers and universities from USA, Europe, China and India, as well as with partners in the business community and public sector. SMU's city campus is a modern facility located in the heart of downtown Singapore, fostering strategic linkages with business, government and the wider community. www.smu.edu.sg

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