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India, Singapore governments organise hackathon

In line with India's economic ambition, such events will foster an environment where innovation and start-ups will help India become a \$5 trillion economy.

by Samaya Dharmaraj — 1 October, 2019 in Digital Transformation, India, News, Singapore



Image credit: HRDMinistry; Twitter

The Indian Institute of Technology in Madras (IIT-Madras), in collaboration with the Nanyang Technical University (NTU), organised the second Singapore-India Hackathon this week.

This year, the themes were good health and well-being; quality education; and affordable and clean energy.

Good Health and Well-being		Quality Education		Affordable and Clean Energy
Problem Statement Epidemiology analysis Problem / Current Situation: Presently centralized data repository is missing for various diseases / citizens for different regions of the country.	Problem Statement Hospital Waste Management Problem / Current Situation: In many developing countries the malpractice of reusing medical waste is observed and can be dangerous for human health. e.g. consumables used while operations and partially consumed items and leftovers.	Problem Statement Attentiveness & Attendance Detection Problem / Current Situation: It's a challenge to detect student's attention level, student attendance and to provide real-time feedback to teachers, which can help in improving overall education system.	Problem Statement Sentiment Analysis of Students Problem / Current Situation: Stress in student is a worrying factor and many times it leads to depression / hypertension and few cases students may take drastic steps. Majority of the students use smart phone and are very active on social media.	Problem Statement Effective air quality control Problem / Current Situation: Volatile organic compounds (VOCs) are gases that are given off by many indoor sources. Concentrations of most volatile organic compounds are higher in indoor air than outdoor air. The health effects caused by VOCs depend on the concentration and length of exposure to the chemicals. Appropriate auditing mechanism required to grade pollution level(s) and suggest corrective measures control them.
Solution needed: Smart solution for predictive analysis and medication support using Epidemiology of citizens / diseases / geography. The application should be able to assist policy makers to provide better health services in the affected areas.	Solution needed: Can we build application / framework to track and avoid reuse of medical waste? Smart bins with all the sensors having tracking mechanism can be developed.	Solution needed: Build an application to detect attentiveness of the class for better education. The system should be real-time so that the actions can be quick and effective.	Solution needed: Solution needed to understand the psychological and emotional state of the students by analysing their social media behaviour. Can we provide a tool for timely support for the students passing through such phase?	Solution needed: Solution needed to understand our indoor air quality and reduce pollution. How can we perform effective air quality measurements and take corrective actions to improve air quality? Development of customizable audit tool and comparing with the standards provided by "EPA audit system" or such alike systems.

This year's problem statements for participants. [Image credit: The Ministry of Human Resource Development's Innovation Cell]

At the prize distribution ceremony, the Indian Prime Minister Narendra Modi said that the role of innovation and start-ups will be crucial to help achieve India's goal to become a US \$5 trillion economy.

India is already among the top three start-up friendly ecosystems. During the last five years, it has prioritised innovation and incubations. Programmes like [Atal Innovation Mission](#), the PM research fellowship, and the [Startup India](#) initiative are the foundation of 21st century India, he said.

The country is trying to promote modern technologies like machine learning, artificial intelligence, and blockchain among students from as early as the sixth grade to create an ecosystem that becomes a medium for innovation, the Minister added.

He noted the country is encouraging innovation for two reasons. "One is we want easy solutions to solve India's problems to make life easier. And another we in India want to find solutions for the whole world. India solutions for global application, this is our goal and our commitment," he said.



The Minister also proposed a hackathon involving ASEAN nations to find solutions to tackle global warming and climate change.

In November 2018, the [Ministry of Human Resource Development](#) and the [All India Council for Technical Education](#) worked with Singapore's NTU to organise a 36-hour competition, themed 'Smart Campus.' The

hackathon had 20 teams of three university students each from India and Singapore.

Earlier this year, a [hackathon](#) was organised by India's policy commission. NITI Aayog, with the vision to further expand the idea of 'Artificial Intelligence, AI for All', organised a hackathon to source sustainable, innovative, and technologically-enabled solutions to address challenges in the development space.

The objective of this hackathon was to promote awareness and subsequently develop solutions that deliver efficient computing to address the infrastructure challenges but not compromising on the privacy of data for training AI algorithms.

Another hackathon, the [Smart India Hackathon \(SIH\) 2019](#), was organised in [July](#) by the Indian Institute of Technology Hyderabad on its campus. The event provided students a platform to use technology to solve problems faced in everyday life, inculcate a culture of product innovation, and develop a problem-solving mindset.

It was a unique open innovation model to identify new and disruptive technology innovations to solve challenges faced in the country. The SIH nodal centre at IIT-Hyderabad included nine teams from all over India consisting of six team members, each with two mentors.

The SIH was a five-day event where participating teams from all over India built prototypes to give solutions to problem statements provided by ministries and companies. Industry experts mentored the nine teams on diverse projects in areas such as drought control and ocean cleaning. Mentors guided their teams with design, practicality, and optimisation of the ideas.