

Institution's Innovation Council Jadavpur University

Call for Idea Contest (extension of deadline)

Thousands of people in the country have been affected by the deadly Corona virus and the number of deaths has already reached over 100. Aiming at prevention of the spreading of CORONA virus, a total lock-down of the country has been started from 24th March, which will continue up to 14th April 2020. This situation has opened up a challenge for all startups, companies, and innovators - whose innovation can plug the gap between the demand and supply of essential medical items to fight the Covid-19 outbreak. In general primarily, the solutions could be in the areas of low-cost masks which can capture virus from the air and absorb respiratory droplets; cost-effective thermal scanning devices and rapid diagnostic kits, critical-care equipment -- including portable oxygenators and home-based ventilators to monitor and control the spread of the new coronavirus, among others. However, equally important are issues related to portable health care systems and tracking in hot spots. Location tracking during quarantine period as well as providing portable diagnostic facilities to those quarantined can be a critical challenge. In view of the problems identified above and for development of faster solutions (idea level) Institution's Innovation Council, Jadavpur University has opened up a **Call for Idea contest** on following problems:

A. Development of a Mobile Phone based Application for ECG monitoring:

The scope of work, involves development of the following work packages:

- (i) Development of a small (pocket size) portable interface for logging ECG signals from short leads connected to the body.
- (ii) Transmission of these signals to a mobile phone
- (iii) Tracing these signals on the Mobile phone
- (iv) Cloud storage for Holter monitoring

Such a device has an immense potential in telemedicine and also in extending in-situ critical care in remote areas.

B. Development of a Mobile Phone based Quarantine Monitor Application

The scope of work, involves the following packages:

- (i) Development of a Mobile App residing on a Master mobile phone that regularly monitors blue-tooth connected mobile phones (belonging to quarantined persons) and sends a warning call to the local authorities if one or more phones get de-linked for a specified time. The algorithm to detect intermittent de-link is a major development area.

(ii) Development of a Mobile App residing on the mobile phone of a quarantined person that automatically sends an alarm to the local authorities if it detects more than a certain number of mobile phones in its vicinity. Again, the false alarm avoidance is a major area.

Important :

The students may email these electronically to the Convener(IIC) Dr. Sayan Chatterjee at sayan.chatterjee@jadavpuruniversity.in, sayan1234@gmail.com on or before 30 April, 2020 (Midnight) [Extended deadline] with the following details:

- (i) A conceptual design of the entire system and list of functionalities is required at this stage. The design need not be along the lines of the work-packages specified, but the design must meet the functional requirements specified above.
- (ii) A tentative list of hardware and software items required for development and testing
- (iii) Please mention the cost involved, novelty against market survey, security issues in apps, team names and member details.

On resumption of normalcy, the technology incubation of the selected entries may be taken up by the Startup Cell/CAST/S-Cell /Startups in accordance with the University's IPR policy.

Sayan Chatterjee
(SAYAN CHATTERJEE)

Dr. Sayan Chatterjee
Convener, IIC
Jadavpur University