

**SAFE TRACER:
COVID-19 INFECTEES TRACKING SYSTEM
SUITABLE FOR SRI LANKA**

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Abstract

The ongoing COVID-19 pandemic situation reached Sri Lanka in 2020 and is yet to be fully controlled. As a highly contagious disease, COVID-19 spreads rapidly among the community upon contact. To avoid the spread of this virus, it is extremely important to identify contaminated locations that pose a risk of infecting any visitor and identifying infected individuals and those who have come to close contact with them.

The current solutions existing in the world are not entirely suitable for Sri Lanka as the social protocols and economic backgrounds differ at great lengths that foreign solutions seem impractical for contact tracing within our country.

The contact tracing methods already implemented in Sri Lanka includes traditional methods such as taking records of visitors' names and details at different service providing locations. These methods are proving to be highly ineffective as there is no connection between the data logged at different locations and there is no validating of these information. In addition to these drawbacks, there is a common reluctance that the community shows towards these methods due to the consumption of time and the inadequate privacy of their details given to these stations.

The existing digital solutions do not provide logging in travel information and seem to have unmet the user requirements or their expected outcome.

With the shortcomings of all of these inadequate solutions currently available in the country, the authorities are still struggling in the process of contact tracing.

Safe Tracer was developed with the goal of providing a feasible solution suitable for Sri Lanka in tracking people's whereabouts while protecting their privacy to effectively identify contaminated locations and individuals those who have a higher risk of getting infected with the COVID-19 virus due to their exposure to the virus, to minimize the further spreading of this disease.

This project focuses on carrying out digital contact tracing process by collecting minimum amount of personal data while guaranteeing the privacy of their details. This

solution mainly uses Android mobile and web application development, API development and database management developed using the tools Android, Java, MSSQL Database, .NET and Angular.

The users are registered into the system under three different categories; citizens, service providers and drivers. Only the administrator of the system can access the user details and data using the web application of Safe Tracer upon permission granted by the users.

The ease of use and the feature that allows registration of a person even when they do not own a smartphone makes this app suitable for a country like Sri Lanka where there is a substantial crowd within the country without access to novel technology.

With the additional features and the user friendliness which suits the Sri Lankan community ensures that the Safe Tracer application can provide a practical solution that can be implemented in Sri Lanka to speed up contact tracing process in Sri Lanka during this Pandemic.