

A Machine Learning Approach to Digital Contact Tracing

Authors : Badrinath Singhal, Chris Vorster, Di Meng, Gargi Gupta, Laura Dunne, Mark Germaine

Abstract : Contact tracing is a method used by public health organisations to try to prevent the spread of infectious diseases in the community. Traditionally performed by manual contact tracers, more recently, the use of apps has been considered utilising phone sensor data to determine the distance between two phones. In this paper, we investigate the development of machine learning approaches to determine the distance between two mobile phone devices using Bluetooth Low Energy, sensory data and meta data. We use the Tab-Net architecture and feature engineering to improve the existing state-of-the-art (total nDCF 0.21 vs 2.08), significantly outperforming existing models.

Keywords : BLE, COVID-19, contact tracing, RSSI, TabNet

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