Recede: A Social Distancing System Using ESP32 Microcontroller and Bluetooth Low Energy for Peer-to-Peer Warning Signal

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In Partial Fulfillment

of the Requirements for the Degree

Bachelor of Science in Information Technology

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June 2023Approval Sheet

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# Abstract

This study was focused on developing a social distancing system “Recede” to mitigate the spread of COVID-19 infection especially in schools. The aim of this study was to create a hardware solution that solves the noncompliance of individuals in the social and physical distancing and to incorporate a software that can record individuals who came in close contact with each other. The researchers used ESP32 Microcontroller as the primary tool for development. The device was tested at West Visayas State University. The participants were given a device (Recede) to carry the moment they enter the school premises. The Recede records the information of the individuals who came in close contact with them for more than ten (10) seconds and logs the data into the database. After the development, the system underwent testing and evaluation using ISO 25010. The outcome resulted in a mean of 3.80, which is equivalent to Very Good.

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