

West Visayas State University
COLLEGE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY
La Paz, Iloilo City

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

An Undergraduate Thesis
Presented to the Faculty of the
College of Information and Communications Technology
West Visayas State University
La Paz, Iloilo City

In Partial Fulfillment
of the Requirements for the Degree
Bachelor of Science in Information Technology

by
Catherine G. Duero
Jason P. Esperela
John Ray T. Godin
Jellie Marie J. Jover
Albert S. Parreño

June 2023

Approval Sheet

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Approved:

DR. EVANS B. SANSOLIS
Adviser

ENGR. LEA M. GABAWA
Co-Adviser

DR. FRANK I. ELIJORDE
Chair, Information Technology

DR. MA. BETH S. CONCEPCION
Dean

June 2023

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Iloilo City, Philippines

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Catherine G. Duero

Jason P. Esperela

John Ray T. Godin

Jellie Marie J. Jover

Albert S. Parreño

June 2023

West Visayas State University
COLLEGE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY
Ia Iga, Iloilo City, Philippines

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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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