

Volume 7 Number 1 JULY 2022 The **Journal of Computational Innovations and Engineering Applications (JCIEA)** is a peer-reviewed, open access journal of De La Salle University, Manila. The JCIEA aims to promote the development of new and creative ideas on the use of technology in solving different problems in different fields of our daily lives. The JCIEA solicits high quality papers containing original contributions in all areas of theory and applications of Engineering and Computing including but not limited to: Computational Applications, Computational Intelligence, Electronics and Information and Communications Technology (ICT), Manufacturing Engineering, Energy and Environment, Robotics, Control and Automation, and all their related fields. The JCIEA editorial board is comprised of experts from around the world who are proactively pushing for the development of research in these fields.

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ISSN 2507-9174

Published and distributed by De La Salle University Publishing House 2401 Taft Avenue, 0922 Manila, Philippines Telefax No. (+63 2) 8523-4281 Email: dlsupublishinghouse@dlsu.edu.ph Website: https://www.dlsu.edu.ph/research/publishing-house/journals/jciea/

The De La Salle University Publishing House is the publications office of De La Salle University, Manila, Philippines.

Annual Subscription Rates: Foreign libraries and institutions: US\$60 (airmail). Individuals: US\$50 (airmail). Philippine domestic subscription rates for libraries and institutions: Php1,800, individuals: Php1,500. Please contact Ms. Joanne Castañares for subscription details: telefax: (632) 523-4281, e-mail: joanne.castanares@dlsu.edu.ph.

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From the Editor

The Journal of Computational Innovations and Engineering Applications (JCIEA) is a peer-reviewed and abstracted journal published twice a year by De La Salle University, Manila, Philippines. JCIEA aims to promote and facilitate the dissemination of quality research outputs that can push for the growth of the nation's research productivity. It is currently listed in the Andrew Gonzalez Philippine Citation Index. In its seventh volume, first issue, six articles were selected to provide valuable references for researchers and practitioners in the field of environmental engineering, air quality monitoring, agricultural crop health assessment, healthcare engineering, assistive systems, machine learning, computer vision, video processing, wireless systems, motor controller for electric vehicles, and robotic systems.

The first article is "Modeling the Spread of Measles in the Philippines Using the Susceptible-Infected-Recovered (SIR) and Susceptible-Exposed-Infected-Recovered (SEIR)". The researchers used the data they have obtained from the Department of Health to model the measles dynamics. measles dynamics were modeled using different compartmental, parameter, and population models. Each model was compared according to goodness of fit and accuracy of predictions. Also, linear population models had unrealistic parameters due to unrealistically high magnitudes or negative values of the population slope which meant that constant population models were more realistic and thus, more accurate. Based on the data analysis, conducting quarantines are more effective than vaccinating individuals during an epidemic.

The second article is "*Real Time Flood Detection, Alarm and Monitoring System Using Image Processing and Multiple Linear Regression*". It is important in the low-lying areas that the level of water is monitored. That is why this study has been conducted to ease the evacuation of the people in the low lying areas during flood. Three sensors that were used are the rain gauge, float switch, and flow rate meter sensor. It measures two of the important parameters in flood detection namely precipitation rate (mm/hr), flood level (ft), and the flow rate (L/hr). The data accumulated by the sensors are real time and sent to the Android application so it can be used by people living in the area to monitor the flood levels in real time. Based on the data obtained and as compared to the conventional, a small mean squared error (MSE) of these 2 data which is 0.125 was achieved.

The third article is "*Realization of Boolean Algebra for a Biometric Wardrobe with CMOS Stick Monochrome Encoding*". Safety and security are still of great national concern in the Philippines, with an estimated 41,300 crime incidents and theft as the most prevalent index crime. To complement these efforts, there is a growing need to advance security measures in safekeeping valuables in people's homes, hence, the innovation of a Biometric Wardrobe. This paper aims to enhance a regular wardrobe by installing a biometric scanner, an alarm, and a serial camera and by creating a model with its corresponding logic gate circuit and CMOS circuit mechanism to secure a wardrobe that can be replicated inside many Filipino homes for better security of their valuables. Based on the gathered results, it was determined that the mechanism of the biometric wardrobe was analogous to the logic gates circuits, CMOS circuit, and stick diagram that were made. Thus, the system can catch an intruder.

The fourth article is "Sentiment Analysis using Logistic Regression". This paper aims to determine which model is best fitted to be used for the sentiment analysis. Finding the best classifier is significant since it will be utilized in classifying the emotion of the Twitter users. Evaluating the sentiment of a person should be done in most careful and sensitive way. The machine learning model to be used must have a high accuracy score. The performance scores of each machine learning algorithm has been computed. The four algorithms used are: Support Vector Classifier, Stochastic Gradient Descent, Naive Bayes and Logistic Regression. They have an accuracy of 69%, 71%, 77%, and 81% respectively. The Logistic Regression Model has the highest accuracy and best fitted algorithm for prediction of potential mental health crisis tweets.

The fifth article is "*The Role and Impact of Information and Communications Technology (ICT) to Employees in Work from Home Set-up*". This pandemic causes the majority of the workforce of both the private and public entities to let employees work at home to avoid the spread of the virus. During this time, there is another test for some labor forces. Decidedly telecommuting bargains from how to center with at-home interruptions, to attempting to be beneficial, attempting to discuss well with colleagues from far off, and simultaneously nurturing. This paper aims to describe the role and impact of ICT in work from home set-up by unfolding how ICT affects the employee's relationship towards his/her work-life, working relationship and personal life. This paper provides indications of how ICT affects the performance of employees while working at home. Also, suggestions are specified in this paper to acquire a work-life balanced among employees in order to cope with the limitations of ICT in dealing with work management.

The sixth article is "Researcher Evaluation, Assessment, and Database System (READS): An AI-based Performance Analysis". This study aims to develop an intelligent monitoring framework as a web application for assessing and observing faculty researchers in R&D of various colleges of the University. Specific factors were used as the basis for evaluation and were based on the criteria for the best researcher in the university namely: number of completed projects, research dissemination, patent or copyright certification, utilization of research, research-related awards, educational attainment, and Google Scholar metrics. These factors are given apt weight to be computed as T-index - the faculty researcher performance indicator. Research priorities or categories are also put into consideration. Subsequently, it was merged into the software system developed. The developed web platform helped in recognizing distinguished researchers, level-up their research performance, and unleashed the researcher's potential.

Original research outputs are most welcome to JCIEA. There is no publication fee in this journal, and the research papers are assured of fair and fast peer review process. For further information, please visit www.dlsu. edu.ph/ offices/publishinghouse/journals.asp.

Prof. Elmer P. Dadios, PhD *Editor-in-Chief, JCIEA*