2022 2nd International **Conference in Information and Computing Research** (iCORE 2022)

Cebu, Philippines 10-11 December 2022



IEEE Catalog Number: CFP22BH1-POD ISBN:

979-8-3503-3391-6

Copyright © 2022 by the Institute of Electrical and Electronics Engineers, Inc. All Rights Reserved

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

*** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.

 IEEE Catalog Number:
 CFP22BH1-POD

 ISBN (Print-On-Demand):
 979-8-3503-3391-6

 ISBN (Online):
 979-8-3503-3390-9

Additional Copies of This Publication Are Available From:

Curran Associates, Inc 57 Morehouse Lane Red Hook, NY 12571 USA Phone: (845) 758-0400

Fax: (845) 758-2633

E-mail: curran@proceedings.com Web: www.proceedings.com



2022 2nd International Conference in Information and Computing Research (iCORE) iCORE 2022

Table of Contents

Message from the General Chairs	xiii
	xiv
Message from the Program Chairs	xv
Welcome Message on behalf of the Program Committee Chairs	xvi
Keynote Addresses	xviii
Industry Talks	xxi
International Advisory Board	xxiii
Organizing Committee	
Production and Creatives Committee	
Event and Technical Production Committee	xxvi
Reviewers	xxvii
Collaborators, Sponsors and Partners	xxix
Poster Papers	
Topic Modeling on Customer Feedback from an Online Ticketing System using Late Allocation and BERTopic	ent Dirichlet 1
Topic Modeling on Customer Feedback from an Online Ticketing System using Late Allocation and BERTopic	1
Allocation and BERTopic	1
Allocation and BERTopic	1

Fish-be-with-you: An Augmented Reality Mobile Application About Endangered Marine Species 17 Marie Jocelle Y. Mina (FEU Institute of Technology, Philippines), Marr Darwin T. Antonio (FEU Institute of Technology, Philippines), John Matthew B. Clemente (FEU Institute of Technology, Philippines), Carl Ivan M. Yap (FEU Institute of Technology, Philippines), Joseph Calleja (FEU Institute of Technology, Philippines), Ma. Corazon Fernando-Raguro (FEU Institute of Technology, Philippines), Ace C. Lagman (FEU Institute of Technology, Philippines), and John Heland Jasper Ortega (FEU Institute of Technology, Philippines)
CCT Online Request of Students Credentials: A Document Management System for Private HIEs
in the Philippines
Selecting of Pet Adopters using C4.5 Decision Tree Model Algorithm
Implementation of Student Monitoring Through Face Recognition and Temperature Using
Raspberry Pi
Sentiment Analysis and Topic Classification of Twitter-based Data Set on the Face-to-face Classes Resumption in the Philippines during the COVID-19 Pandemic
CONTRAST: An Animated Short Film about Rescue Against Black Hat Hackers
Artificial Intelligence
Research on Service Evaluation Improvement of Hot Pot Restaurants Based on Data Mining 50 Lei Liu (Huainan Normal University, China; National University, Philippines) and Qingyu Liu (Huainan Normal University, China; National University, Philippines)
A Study on the Usability of Text Analysis on Web Artifacts for Digital Forensic Investigation

An Agent-Based Modeling and Simulation Tool for the Exploration of the Effects of Masks and Vaccines on COVID-19 Spread
Hybrid Android Malware Detection Model using Machine Learning Algorithms
Trojan Malware Detection using ANN, Naïve Bayes and SVM Machine Learning Algorithms
Text-Based Sentiment Analysis of Students' Satisfaction: An Input to Strategic Plan
A Framework for a Mobile Informative Push Notification and Web Application for the Office of Senior Citizens Affairs City of Manila
Emerging Technologies
BeAwareOfYourAct: A Framework for Behavioural Action Detection in Workplace through Deep Learning Analysis and Augmented Action Pattern Recognition
CampusTrace: A Framework for Centralized Contact Tracing System for Universities in Preparation for Face-to-Face Classes
i-LETyouReview: Gamifying Philippines' Licensure Examination for Teachers Reviewer

PedCon: A Pediatrician Animated-Based Consultation and Appointment System using Lempel-Ziv-Welch and K-Anonymity Algorithm Lherie Joy M. Amonelo (Laguna State Polytechnic University, Philippines), Lyka Alliah C. Cailles (Laguna State Polytechnic University, Philippines), Edwil Joshua D. Sadsad (Laguna State Polytechnic University, Philippines), and Zerah-Jane M. Astoveza (Laguna State Polytechnic University, Philippines)	106
Eductainment: A Gamified Learning Management System for Senior High School Subjects with Randomized Algorithm	111
Validation of Customer Requirements for Software Startup named Parada: Parking Space Rental and Leasing Application System Irene L. Balmes (Lyceum of the Philippines University, Philippines) and Erlito M. Albina (Lyceum of the Philippines University, Philippines)	116
Swinelink: An Application for Swine Health Condition Reporting and Technical Services with Agent-Based Modefor African Swine Flu Outbreaks	122
Cryptanalysis of the Modified Hill Cipher Algorithm using Myszkowski Transposition	128
Web-Based Enrollment System for Public Junior High School in the Philippines: A Case Study in the Province of Cavite Public Schools	134
OCLEAN: An Endless 2D Mobile Game Focused on the Awareness of Cleaning Marine Plastic Waste	139

Philippine Army Personnel	Kalakip: A Short Animation Film about Depression in Young Adults during COVID-19 Pandemic Jhasmin Zsanelle P. Borromeo (National University, Philippines), Audrie Brylle C. Catapat (National University, Philippines), Lord Wally V. Galido (National University, Philippines), Bernadette S. Villa (National University, Philippines), Eliseo Q. Ramirez (National University, Philippines), and Ryan Richard H. Guadaña (National University, Philippines)	144
System (HEC-HMS)	Vinee C Cajegas (Ateneo de Naga University, Philippines) and Adrian	150
(National University, Philippines), Renzylyn Andam (National University, Philippines), Charena Baluyot (National University, Philippines) UMatter: A Mobile Application to Help Mitigate Depression	System (HEC-HMS)	. 157
John Zoren Tellington (Don Mariano Marcos Memorial State University, Philippines), Reno Angelo Banderlipe (Don Mariano Marcos Memorial State University, Philippines), Justin Mydjell Nuqui (Don Mariano Marcos Memorial State University, Philippines), Joneflord Flores (Don Mariano Marcos Memorial State University, Philippines), and Alvin Malicdem (Don Mariano Marcos Memorial State University, Philippines) Evaluation of the Effect of Varying Digital Elevation Model (DEM) Resolutions on Hydrologic Model Performance of a Tropical Watershed	(National University, Philippines), Renzylyn Andam (National University, Philippines), Charena Baluyot (National University,	
Hydrologic Model Performance of a Tropical Watershed	John Zoren Tellington (Don Mariano Marcos Memorial State University, Philippines), Reno Angelo Banderlipe (Don Mariano Marcos Memorial State University, Philippines), Justin Mydjell Nuqui (Don Mariano Marcos Memorial State University, Philippines), Joneflord Flores (Don Mariano Marcos Memorial State University, Philippines), and Alvin	164
the Philippines: A Case Study	Franz Santos (National University, Philippines), Francis Tevar (National University, Philippines), Khrizelle Angelique Sablan (National University, Philippines), and Eugenia Lagmay (National	170
Daryl Vincent Rivera (Don Mariano Marcos Memorial State University), Chelsea Ancheta (Don Mariano Marcos Memorial State University), Sheena Sapuay-Guillen (Don Mariano Marcos Memorial State University), Juebert Linard Abuan (Don Mariano Marcos Memorial State University), and Quennie Remary Angel Rosido (Don Mariano Marcos Memorial State	the Philippines: A Case Study Franz Santos (National University, Philippines), Shane Francis Garcia (National University, Philippines), and Christian Acosta (National	177
·	Daryl Vincent Rivera (Don Mariano Marcos Memorial State University), Chelsea Ancheta (Don Mariano Marcos Memorial State University), Sheena Sapuay-Guillen (Don Mariano Marcos Memorial State University), Juebert Linard Abuan (Don Mariano Marcos Memorial State University), and Quennie Remary Angel Rosido (Don Mariano Marcos Memorial State	184

AdEx: Admission Examination System Utilizing Item Analysis with Automated Report Generation	1
Kenneth Gunay (National University, Philippines), Chloe Sophia Bonifacio (National University, Philippines), Paolo Miguel Alasco (National University, Philippines), Roben Juanatas (National	
University, Philippines), Christian Caduldulan (National University, Philippines), Jondon Villanueva (National University, Philippines), and Emeliza Yabut (National University, Philippines)	
A Development Framework for a Health Monitoring Application in the Power App Platform 19 Ryan Richard Guadaña (National University, Philippines), Vincent Kyle Caballa (National University, Philippines), Charles Enzoe Correa (National University, Philippines), Daniel Lee James Borgoña (National University, Philippines), Ken Zyrus Itulid (National University, Philippines), Marciano Fidel Avendaño (National University, Philippines), Arlene Trillanes (National University, Philippines), and Cornelia Cruz (National University, Philippines)	7
One Barangay: A Mobile and Web Barangay Management System 20. Marilou Jamis (National University, Philippines), Cristian Coloma (National University, Philippines), Paul Joshua Cabanlit (National University, Philippines), Rommel Balanay (National University, Philippines), Sherwin Ray Menor (National University, Philippines), Emeliza Yabut (National University, Philippines), and Susan Caluya (National University, Philippines)	2
D-KNIGHTS: A 3D Role-Playing Mobile Game for Students with Dyscalculia and Math Learning Disability	8
MASA: A Mobile and Web Application Framework for A G2C Integrated Municipal Disaster Risk Reduction and Management System for the Community of Rodriguez, Rizal	6
E-Services and Data Management	
Performance Analysis of Mobile Payment Solutions and Services in the Philippines	2
The Novel Approaches in Monitoring and Controlling Hydroponic Greenhouse Systems: A Literature Review	1
E-Governance Practices and Quality of Service Delivery through G2C in the Philippines	8

Hope, Gratitude, and Optimism May Contribute to Student Flourishing during COVID-19 Pandemic.	247
Rickson John Banares (Our Lady of Perpetual Succor College, Philippines), John Mark Distor (Polytechnic University of the Philippines, Philippines), and Ian Llenares I. (National University, Philippines)	
Information Management Systems Utilizing Prescriptive Analytics for Del Rosario Compound Neighborhood Association Inc. (DRCNAI)	. 252
Mapping the Suitability of Existing and Probable Isolation Facilities Donnah Elaine Jurado (University of Saint Louis, Philippines), Ertie Abana (University of Saint Louis, Philippines), May Valdez (University of Saint Louis, Philippines), Helen Grace Acedo (University of Saint Louis, Philippines), Diwata Miranda (University of Saint Louis, Philippines), J-Randel Cammayo (University of Saint Louis, Philippines), Winalene Valentin (University of Saint Louis, Philippines), and Krandell Lyne Baccay (University of Saint Louis, Philippines)	. 258
Trail of Journey: An Analysis of Digital Footprints on Content Attributes and Initiation of Filipino Travel Related Contents on Youtube	. 264
Customer Satisfaction with Disruptive Technology-Driven Features in Online Shopping Platforms Arlene O. Trillanes (National University, Philippines) and Ronaldo A. Juanatas (Technological University of the Philippines, Philippines)	270
A Web-based Application for Employee's Leave Management System for the City Government of Tagaytay	. 275
A Peformance Evaluation of YOLOv3 and CIE Lab Color Space Pixel Color Analysis in Fire Detection Bligh Stian E. Ignacio (University of San Carlos, Philippines), Liam Matthew B. Villaflor (University of San Carlos, Philippines), Victor A. Chiong (University of San Carlos, Philippines), and Christine F. Peña (University of San Carlos, Philippines)	. 279

Digital Signal Processing, Machine Vision, and Engineering

Classifying Solar Glint in an Intertidal Zone Beethoven Arellano (University of San Carlos, Philippines), Philip Virgil B. Astillo (University of San Carlos, Philippines), and Van Patiluna (University of San Carlos, Philippines)	285
Hydrologic Assessment on the Impact of Land Cover Change in the Streamflow of Davao River Basin using Hydrologic Modeling System Levi John Amador (National University - Manila, Philippines), Katrina Mae Armea (National University - Manila, Philippines), Erick Oracion (National University - Manila, Philippines), John John Padolina (National University - Manila, Philippines), Jan Christopher Tuason (National University - Manila, Philippines), and Franz Santos (National University - Manila, Philippines)	290
Image-Based Recognition of Fruit Bearing Rambutan (Nephelium Lappaceum) Using Deep Learning Jolitte A. Villaruz (Aklan State University, Philippines), Julie Ann A. Salido (Aklan State University, Philippines), Dennis M. II Barrios (Aklan State University, Philippines), and Rogelio L. Felizardo (Aklan State University, Forestry and Environmental Sciences, Philippines)	297
Cross-Model Interpretation of Machine Learning-Based Automatic Baybayin Script Recognition Systems Cerwin Dexter Dela Rosa (National University, Philippines), Kreed Zion Lorenzo Lagunilla (National University, Philippines), Jomari Ramos (National University, Philippines), Austin Kenneth San Pedro (National University, Philippines), Gabriel Avelino Sampedro (University of the Philippines - Open University, Philippines), and Ramon Rodriguez (National University, Philippines)	302
MetaPrint: A Virtual Additive Manufacturing Tool for Print Analysis Gabriel Avelino Sampedro (Kumoh National Institute of Technology, South Korea), Ramon Miguel Africa (Research and Development Center, Philippine Coding Camp, Philippines), Mideth Abisado (National University, Philippines), Dong-Seong Kim (Kumoh National Institute of Technology, South Korea), and Jae-Min Lee (Kumoh National Institute of Technology, South Korea)	308
Author Index	313