

2022 2nd International Conference on Information Technology and Education (ICIT&E 2022)

**Malang, Indonesia
22 January 2022**



**IEEE Catalog Number: CFP22BQ0-POD
ISBN: 978-1-6654-9434-2**

**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:	CFP22BQ0-POD
ISBN (Print-On-Demand):	978-1-6654-9434-2
ISBN (Online):	978-1-6654-9433-5

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

CURRAN ASSOCIATES INC.
proceedings
.com

Table of Contents

Software Development to Detecting the use of Mask using Convolutional Neural Networks <i>Pandu Setiawan, Yulius Denny Prabowo</i>	1
Antecedents of Leadership Strength Toward Teacher Self Efficacy for Online Learning Quality Based on COVID-19 Pandemic <i>Imron Arifin, Juharyanto, Maulana Amirul Adha, Abd. Mu'id Aris Shofa, Lidya Amalia Rahmania, Mahani Mokhtar</i>	5
Hydraulic Exoskeleton Design for Cerebral Palsy <i>Muhammad Nurrohman Jauhari, Andarmadi Jati Abdhi Wasesa, Yandika Fefrian Rosmi, Rusdiyantoro, Muchamad Irvan</i>	12
An Investigation on Patient Incident Reports: Association Rule Mining Approach <i>Cheng-Feng Wu, Hsin-Hung Wu, Cheng-Shan Wu, Kuan-Kai Huang, Meng-Chen Lin</i>	16
Classifying Natural Disaster Tweet using a Convolutional Neural Network and BERT Embedding <i>Lucas Satria Aji Dharma, Edi Winarko</i>	23
Software as a Service (SaaS) Adoption Factors: Individual and Organizational Perspective <i>Abd Rahman, Apol Pribadi Subriadi</i>	31
Clustering of Fine Art-Images as Digital Learning Content using Data Mining-Image Analysis Techniques <i>Citra Kurniawan, Shirly Kusumaningrum, Ence Surahman, Zuhkhriyan Zakaria</i>	37
The Relationship of Corporate Social Responsibility, Brand Trust and Electronic Word of Mouth <i>Nguyen Thi Phuong Thao, Lung Thi Kieu Oanh, Bui Thanh Khoa</i>	43
Analysis of Information Quality and Security Factors that Affect The Use of Pet Apps during COVID-19 <i>Surjandy, Cadelina Cassandra</i>	49
Robust Data Mining Visualization for Learning Outcomes <i>Heri Suwignyo, Citra Kurniawan, Dedi Kuswandi, Karkono, Dewi Ariani</i>	54
Online Teacher Professional Education Program (PPG) Practices Through Moodle-Based E-learning <i>Yuniawatika, Makbul Muksar, Titis Angga Rini, Muhammad Alfian</i>	60
Prototype of Interactive Multimedia Learning About Natural Resources and Energy to Elementary School Students <i>Hana Andringrum, Rikza Akmal Faruqi, Imam Gunawan, Herman Surjono, Nafi'atul Latifah</i>	65

Android-Based Word Game Applications to Increase the Vocabulary of Deaf Children <i>Rizqi Fajar Pradipta, Dwi Wahyuni, Haikal Andrean</i>	70
Code Play (CP) based on MOOC's to Boost Vocational Students' Learning Motivation during a Pandemic <i>Ahmad Mursyidun Nidhom, Hakkun Elmunsyah, Andika Bagus Nur Rahma Putra, Azhar Ahmad Smaragdina, Gres Dyah Kusuma Ningrum, Muchamad Irsyad</i>	75
Underwater Shrimp Digital Image Segmentation Using Edge Detection Method on Fog Network <i>Arif Setiawan, Wiwit Agus Triyanto, Aji Setiawan, Budi Warsito, Adi Wibowo</i>	81
Recommendation Algorithm Using Weighted User Behavior Score-Based Similarity <i>Triyanna Widiyaningtyas, Indriana Hidayah, Teguh Bharata Adji</i>	87
Usability Analysis to Measure the Effectiveness of Implementing the Mapping System for COVID-19 Patients <i>Anang Aris Widodo, Agung Teguh Wibowo Almais, Muslim Alamsyah, Rudi Hariyanto</i>	92
The Analysis of the Usage of Telemedicine Services During the Pandemic in Indonesia <i>Kevin Adnyzio Sinuraya, Angelica Janissia, Kevin Alexander, Natalia Limantara</i>	97
Impact of Online Teaching on the Placement in Professional courses in India <i>Chetan Panse, Shailesh Rastogi</i>	102
Comparative Analysis of K-Means and K-Nearest Neighbor Algorithm for Telecom Fraud Detection <i>Rachmadita Andreswari, Dita Aprilia Rahmani, Ria Rahmawati, Achmad Akbar H</i>	107
School Anxiety Identification After Online Learning Post COVID-19 <i>Nur Hidayah, M. Ramli, Kartika Candra Kirana, Husni Hanafi, Rofiqoh, Mila Yunita</i>	112
Learning Media for Basic Physics Using Interactive Web-based Simulation <i>Viska Mutiawani, Nadhila Nurdin, Syahrin Nur Abdulmadjid, Nurdin Ali</i>	117
Development of E-module Teaching Simulation Tools in SIPEJAR for Teaching Practice of Prospective Teacher Students <i>Titis Angga Rini, Ella Irwina</i>	122
Development of Computer Teaching Materials on Education Management Applications Through E-Learning Module <i>Asep Sunandar, Mustiningsih, Sunarni, Mohammad Efendi, Ediyanto, Muhammad Zidni Iلمان Nafi'a, Henry Praherdhiono, Linda Setiawati, Memet Casmat</i>	127
Implementation of Management Network and Users using Radius at the Bandung City Service Office <i>Frederikus Doni Mardianto, Muhammad Ganjar Maulana, Denny Krisandi, Arief Agus Sukmandhani</i>	132

Digital Image Segmentation of Chicks Flock Using Clustering Method on Fog Computing Network <i>Wiwit Agus Triyanto, Arif Setiawan, Aji Setiawan, Budi Warsito, Adi Wibowo</i>	140
Perceived Savings, Security and Price Value on Intention to Use and Actual Usage of M-Payment <i>Aries Wicaksono, Nuraini Sari, Ridho Bramulya Ikhsan</i>	145
Classification of Indonesian Sign Language Greeting Words for Translators for Speech Impaired Persons with Convolutional Neural Network-2D Time Distributed <i>Afrizal Amri Rahman, Eko Mulyanto Yuniarno, Reza Fuad Rachmadi</i>	150
Customer Behavior Analysis of the Chinese New Year from A Supermarket in Taiwan <i>Yung Tai Tang, Hsin-Hung Wu, Hao-Wei Yang, Jiunn I Shieh, Ming Min Lo</i>	156
Effort Estimation method for ETL Big Data projects <i>Jonathan Yanerick Arnaud Moura, Bibi Zarine Cadessaib</i>	160
The Development of e-Books Religio-humanistic Parenting as an Effort to Prevent Violence Against Children <i>Sri Wahyuni, Rezka Arina Rahma, Mohammad Ahsanuddin, Decky Avrilianda</i>	168
Investigating Elementary Teachers' Understanding, Beliefs, and Intentions toward STEM and Computational Thinking in Education <i>Ence Surahman, Tzu Hua Wang, Kee-Fui Turner Lam, Sulthoni, Ujang Nendra Pratama, Eny Nur Aisyah</i>	175
Optimizing Scrum's Effectiveness in Distributed Software Development Environment During The Pandemic Era: A Systematic Literature Review <i>Kristian Juri Damai Lase; Ridi Ferdiana; Paulus Insap Santosa</i>	181
Factors Influencing of Social Media Ads Usage in Indonesia <i>Sukhranje Singh, Viliona Priscilia, Adrieza Fivaldo, Natalia Limantara</i>	186
Implementing Cramer's V Method to determine the Effect of Musical Style Preference on One's Emotions (Study Case: Spotify) <i>William Susanto, Hezekiah Caleb, Noviany Dharma, Kristien Margi Suryaningrum</i>	191
Understanding Higher Education Students Continuance Intention Towards E-Learning <i>Amy Rahmania, Kezia Jesslyn, Anderes Gui, Suryanto, Nelly, Synthia Atas Sari</i>	196
Fault Classification of Pump Using Support Vector Machine (SVM) Method <i>Avie Aura Dzilfadhilah, Anindita Adikaputri Vinaya, Nicky Yesica</i>	201
Spam Email Detection with Affect Intensities using Recurrent Neural Network Algorithm <i>Nurafifah Alya Farahisya, Fitra A. Bachtiar</i>	206

Melanoma Skin Cancer Classification using Machine Learning: A Systematic Literature Review <i>Eloise Yemima Sari, Ihsan Najam Bimasakti Kiscahyadi, Merlyn Gracia, Alexander Agung Santoso Gunawan</i>	212
The Effect of The Numbers Lotto Media on The Ability of Simple Calculation in The Children with Intellectual Disability <i>Dwi Sukma Wijayanti, Wiwik Dwi Hastuti, Usep Kustiawan</i>	217
Software Architecture Refactoring Based on Data Integration and Interoperability Issues in PeduliLindungi <i>Rony Setyawan, Achmad Nizar Hidayanto, Dana Indra Sensuse, Ryan Randy Suryono, Kautsarina</i>	221
The Importance of Information Technology Usage and Human Governance on Shariah Manufacturing Companies <i>Synthia Atas Sari, Anderes Gui, Idris Gautama So, Hasnah Haron, Angela Natania, Ni Putu Christovera Jayanti</i>	227
Engagement Emotion Classification through Facial Landmark Using Convolutional Neural Network <i>Aulia Nurrahma Rosanti Paidja, Fitra A. Bachtiar</i>	234
Implementation of A Design Learning Based Web Model in Pre-service Elementary School Teachers <i>M. Anas Thohir, Esti Untari, Sukamti, Erif Ahdhianto, Anatri Desstya</i>	240
Development of PBL based Web Learning Model for Students of Elementary School Teacher Education Study Program <i>Erif Ahdhianto, Muh. Arafik, M. Anas Thohir, Siti Mas'ula, Yudithia Dian Putra</i>	247
Voice Recognition on Humanoid Robot Darwin OP Using Mel Frequency Cepstrum Coefficients (MFCC) Feature and Artificial Neural Networks (ANN) Method <i>Mochammad Zava Abbiyansyah, Fitri Utamingrum</i>	251
Entrepreneurial Student Motivation Analysis through Online Media at Universities in Jakarta (Binary Logistic Regression Approach) <i>Tedy Ardiansyah, Nurjanah</i>	257
The Importance of Data Quality to Reinforce COVID-19 Vaccination Scheduling System: Study Case of Jakarta, Indonesia <i>Dwi Yanti Siregar, Hidayat Akbar, Ida Bagus Putu Angga Pranidhana, Achmad Nizar Hidayanto, Yova Ruldeviyani</i>	262
Real-time Social Distance Detection using YOLO-v5 with Bird-eye View Perspective to Suppress the Spread of COVID-19 <i>Imam Husni Al Amin, Falah Hikamudin Arby, Edy Winarno, Budi Hartono, Wiwien Hadikurniawati</i>	269

Comparison of Fast Inverse Square Root Algorithms for 3D Object Rendering Using Ray Tracing <i>Rico Filberto, Jacky Yolanda, Alexander Agung Santoso Gunawan</i>	275
The Effect of Programmer Information Security Awareness on The Results of Vulnerability Assessments in Achieving Secure Applications <i>Hermawan Effendi, Surya Sumpeno, Achmad Affandi</i>	280
Consumer Behavior in Mobile Commerce Adoption: A Systematic Literature Review <i>Eka Novita Sari, Apol Pribadi Subriadi</i>	287
Deep Learning in Image Classification using VGG-19 and Residual Networks for Cataract Detection <i>Ahmad Bondan Triyadi, Alhadi Bustamam, Prasnurzaki Anki</i>	293
Virtual Simulation Learning Based on AR with Sawing Machine Design to Improve and Evaluate the Special Skill for Vocational Education in the COVID-19 Pandemic Era <i>Andika Bagus Nur Rahma Putra, Tee Tze Kiong, Anita Dwi Rahmawati, Eddy Sutadji, Nurul Ulfatin, Mahfud Sahly Subandi</i>	298
Determinant Factors of Learning Tools in Pandemic COVID-19 Era <i>Yakob Utama Chandra, Yohannes Kurniawan, Shamsul Arrieya Ariffin</i>	305
Analysis of Capability Level School Administration Staff in Management Archives Based on Digital Technology <i>Raden Bambang Sumarsono, Dedi Prestiadi, Desi Eri Kusumaningrum, Wildan Zulkarnain, Endra Ubaidillah, Athalla Nauval Bhayangkara, Dwi Wahyu Indrawanto</i>	311
Development of Online Attitude Assessment Instruments Based on Character Education in Elementary School for Blended Learning <i>Putri Mahanani, Sutarno, Muchtar, Siti Umayaroh, Goenawan Roebyanto</i>	316
Internet of Things Environment Automation: A Smart Lab Practical Approach <i>Arielli A. da Conceic,ão, Laura P. Ambrosio, Thamer R. Leme, Ana C. S. Rosa, Fernando F. Ramborger, Guilherme P. Aquino, Evandro C. Vilas Boas</i>	322
Design of Case Method Learning Model based on Intelligence Flexibility Learning in Group Guidance Courses <i>Widya Multisari, Muslihati, Ella Faridati Zen, Indriyana Rachmawati</i>	328
The Effectiveness of Learning Management System (LMS) as a Student Self-Service-based Platform in Community Learning Center (CLC) <i>Kukuh Miroso Raharjo, Monica Widyaswari, Umi Dayati</i>	333
Usability Testing of Developed Virtual Reality Environment to Enhance Communication Skills for Children with Low Functioning Autism Spectrum Disorder <i>Ahsan Romadlon Junaidi, Muchamad Irvan, Joko Yuwono, Dimas Arif Dewantoro, Yovie Alamsyah, Nur Wagis Mulyawati</i>	339

Effectiveness Mobile Peer Support Application to Enhance Teacher Competence: The Moderating Role Teacher Self Efficacy <i>Evania Yafie, Yudha Alfian Haqqi, Inayaturo Robbaniyah, Lisa Nur Maulidia, Alfi Rohmatul Azizah, Wuri Astuti</i>	347
The Use of Communication Media in the Development of Family Therapy Interventions Model for Children with Autistic Syndrome <i>Dimas Arif Dewantoro, Ahsan Romadlon Junaidi, Mohd Hanafi Mohd Yasin, Yovie Alamsyah</i>	353
Learner Facilitation to Develop Conscientizacao during the COVID-19 Pandemic <i>Ellyn Sugeng Desyanty, Wuri Astuti, Munaisra Tri Tirtaningsih, Desi Eri Kusumaningrum, Rahma Kamilia Ali Hikmah, Titah Fatimah Zahra</i>	358
Investigating Needs of Academic Support using Personalized Learning System to Enhance Academic Success among Freshmen <i>Muslihati, Ella Faridati Zen, IM Hambali, Muhammad Ashar, Nur Mega Aris Saputra, Nanda Alfian Kurniawan</i>	363
Exploration of Information Technology Device Development in Improving the Quality of Learning: A Longitudinal Study <i>Ahmad Nurabadi, Fendy Suhariadi, Agus Baharudin, Andhika Gilang Prayoga, Anisa Maulinda, Adetya Dewi Wardani</i>	368
Evaluation of Online Teaching with the SIPEJAR Platform during the COVID-19 Pandemic <i>Imam Gunawan, Sultoni, Wildan Zulkarnain, Rizka Apriani, Agus Baharudin, Andhika Gilang Prayoga, Rissa Prima Kurniawati, Adetya Dewi Wardani</i>	374
The Effectiveness of Physical Function Training Model for Autistic Children with the Assist of Virtual Reality Technology <i>Mohammad Efendi, Mohammad Arif Nazaruddin, Rizky Amalia Rosyidi, Arif Fathoni, Rizqi Fajar Pradipta</i>	378
The Effect of Player Type in Learning Programming with Online Gamification Activities on Student Learning Outcomes <i>Yerry Soepriyanto, Putri Fadilla Azzahra Fazarini, Sulthoni, Tasya Rizki Maulida, Aan Nurfahrudianto, Zainal Afandi</i>	382
Teachers and School Culture: Optimization of Learning Technology in Limited Face-To-Face Meetings <i>Pramono, Teguh Triwiyanto</i>	387
Effectiveness of Implementation of Instructional Supervision during the COVID-19 Pandemic through Utilization of Information and Communication Technology <i>Dedi Prestiadi, Ahmad Nurabadi, Endra Ubaidillah</i>	391
The Effectiveness of Using Recording, Synchronous Communication, and Sharing Information Tools in Training to Improve the Teachers' Instructional Process and Outcome <i>Bambang Budi Wiyono, Zainal D. Kulidtod, Khalip bin Musa</i>	398

Designing Augmented Reality Book for Improving Practical Skill in Scout Education Course <i>Puri Selfi Cholifah, Ni Luh Sakinah Nuraini, Aldy Ferdiansyah</i>	403
Developing Digital Game Based Learning to Support Numeracy of Elementary School Teacher Education Students <i>Ni Luh Sakinah Nuraini, Puri Selfi Cholifah, Wuli Oktiningrum, Sri Qayyuumu Gusti Mahartania</i>	408
Technology Utilization of Quipper School in Children's Literature Learning during COVID-19 Pandemic Era to Increase Reading Interest in Elementary School <i>Muh. Arafik, Yohanes Kuriawan Barus, Ana Fitrotun Nisa, Nur Wiarsih</i>	414
Interactive Website for Online Learning in Elementary School: A study of Practicality and Attractiveness <i>Arda Purnama Putra, Iqlima Pratiwi</i>	420
Predicting Student Achievement Before Final Exam: A Regression-Based Approach <i>M. Anwar Ma'sum</i>	424
AKSENS Application as Virtual Counseling Encouraging Ideal Educational Characters to Reduce Student Mental Health Decline <i>Aulia Widya Kirana, Yolanda Kurniasari, Intan Gerhana Putri Hasibuan, Inefitria Amalia Asyrakal, Theresa Dewi Setiowati, Rizka Apriani</i>	429