

# **2022 IEEE 8th International Conference on Computing, Engineering and Design (ICCED 2022)**

**Sukabumi, Indonesia  
28 – 29 July 2022**



**IEEE Catalog Number: CFP22N11-POD  
ISBN: 978-1-6654-5390-5**

**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:	CFP22N11-POD
ISBN (Print-On-Demand):	978-1-6654-5390-5
ISBN (Online):	978-1-6654-5389-9
ISSN:	2767-7818

**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](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

CURRAN ASSOCIATES INC.  
**proceedings**  
.com

## TABLE OF CONTENTS

1. Windows-based Instant Messaging (IM) Application for Educational Institution - *Budi Yulianto, Rita Layona (PIO #001)...1*
2. Twitter User Sentiment Analysis For RUU Omnibus Law Using Convolutional Neural Network - *Popon Dauni, Muhammad Ali Ramdhani, Dimas Ramdhani Suryapratama, Jumadi, Wildan Budiawan Zulfikar, Rifqi Syamsul Fuadi (PIO #004)...6*
3. Assessing Tax Online System Success: A Validation of Success Model with Focus Group Study - *Beki Subaeki, Aedah Abd Rahman, Khaerul Manaf, Riffa Haviani Laluma, Agung Wahana, Nur Lukman (PIO #006)...12*
4. Sentiment Analysis of State Capital Relocation of Indonesia using Convolutional Neural Network - *Aditya Welly Andi, Cepy Slamet, Dian Sa'adillah Maylawati, Jumadi Jumadi, Aldy Rialdy Atmadja, Muhammad Ali Ramdhani (PIO #007)...18*
5. Usability on Children: a Meta-analysis Review - *Andhika Giri Persada (PIO #009)...24*
6. Development of Seven Segment Display Recognition using TensorFlow on Raspberry Pi - *Teddy Surya Gunawan, Haque Mohammad Reduwan, Mashkuri Yaacob, Nor Fadhil/ah M. Azmin, Nanang Ismail, Md Yusof Ismail, Mira Kartiwi, Azhar A. Rahman (PIO #011)...30*
7. Development of Water Pollution Monitoring and Data Logging using ARM Mbed Platform - *Teddy Surya Gunawan, Aleeya Nadwa Roshara'madan, Nor Khairusshima M. Khairussaleh, Nanang Ismail, Mashkuri Yaacob, Azhar A. Rahman (PIO #012)...36*
8. Speeded Up Robust Features Algorithm on Augmented Reality for Sirah Nabawiyah Learning Media - *Diena Rauda Ramdania, Agung Wahana, Cindy Hanny Nurulaeni, Yana Aditia Gerhana, Wildan Budiawan Zulfikar (PIO #013)...42*
9. Sentiment Analysis of the Use of Telecommunication Providers on Twitter Social Media using Convolutional Neural Network - *Zafiratul Amalia, Mohamad Irfan, Dian Sa'adillah Maylawati, Agung Wahana, Wildan Budiawan Zulfikar, Muhammad Ali Ramdhani (PID #015)...48*
10. Thermal Management for Brush less DC (BLOC) Motor 120KW - *Muhamad Rayhan Ramji and Nanang Ismail (PIO #019)...54*
11. Impact of Interaction, Identification, Customer Satisfaction and Customer Loyalty on Online Video on Demand - *Muhammad AUFAR Alfarisi, Yudi Fernando, Ridho Bramulya Ikhsan (PIO #020)...58*
12. Impact of Identification, Interaction, Enthusiasm on Value in Use: A Case of Electronic Video on Demand - *Cahya Resqia Dewi, Yudi Fernando, Ridho Bramulya Ikhsan, Mochammad Fahlevi (PIO #021)...64*
13. 3S Model Of Mobile Banking Users' Satisfaction - *Cynthia Devina, Yudi Fernando, Ridho Bramulya Ikhsan (PIO #023)...69*
14. Impact of Absorption, Attention, Perceived Enthusiasm of Customer Satisfaction On Electronic Video on Demand - *Fajar Julius Sorgang Lobuan Manurung, Muhammad AUFAR Alfarisi, Cahya Resqia Dewi, Yudi Fernando, Ridho Bramulya Ikhsan (PIO #024)...74*
15. Impact of Celebrity Attractiveness, Credibility and Digital Brand Awareness on Online Purchase Intention - *Tasya Layung Permata, Yudi Fernando, Ridho Bramulya Ikhsan, Lianna Wijaya (PIO #026)...80*

16. A Direct Path Modeling of Mobile Banking Systems on User Satisfaction - *Anita Puji Lestari, Yudi Fernando, Ridho Bramulya Ikhsan, /ka Sari Wahyuni-TD (PIO #027)...85*
17. Intention to Move to E-Grocery Shopping Channels With Gender As Mediator -*Aryadiva Brahim, Rini Astuti, Ridho Bramulya Ikhsan, Erick Fernando, Yuniarty (PIO #028)...89*
18. Implementation of Face Detection to Count the Number of Mall Visitors - Gilang Ryan Fernandes, Didik Wiguna, Fauzan Natsir, Triyadi, Nandang Suwela, Achmad Birowo (PIO #030)...95
19. Development and Validation of The Work Readiness Model of Informatics Students Using Multiple Regression - *Aprilia Sulistyohati, Aulia Paramita, Lia Susanti, Tashia Indah Nastiti, Ridwan (PIO #031)...99*
20. New Node Location Setting Using Random Sample Ratio In Occupancy Area On RRT Algorithm - *Putra Wisnu Agung Sucipto, Annisa Firasanti, Seta Samsiana and Eki Ahmad Zaki Hamidi (PIO #033)...105*
21. Analysis of Grid-Connected Solar Photovoltaic Rooftop System for 900 VA Residential Load in Sukabumi - *Dzifki Moch Dharmawan, Haickal Iman Akbar, Ridwan Maulana, Aryo De Wibowo Muhammad Sidik, /Iman Himawan Kusumah and Marina Artiyasa (PIO #035)...109*
22. Tributary Water Depth and Velocity Remote Monitoring System using Arduino and LoRa -*AmmarAzizi Jasni, Vasser Asrul Ahmad, Teddy Surya Gunawan, Mashkuri Yaacob, Nanang Ismail, Abdul Wasik (PIO #038)...114*
23. Study of Solar Photovoltaic Rooftop System for 1300 VA Residential Load Connected to Grid in Sukabumi - *Muhammad Arsyad, Randika Gerald, Aryo De Wibowo Muhammad Sidik, /Iman Himawan Kusumah, Marina Artiyasa, Anggy Pradiftha Junfithrana (PIO #039)...120*
24. Building Equivalent Static Earthquake Loading Based on RSA Soil Data and Sondir - *Paikun, Dede Fauzi Fitrullatif, Dicki Gustaman, Muhammad Hidayat, Nauval Aziz, Marwahyudi (PIO #040)...125*
25. Scrum Project Management Challenges and Solutions: *Systematic Literature Review* - *Ridwan Budiman, Teguh Raharjo, Agus Suhanto (PIO #041)...131*
26. Measurement of Information Security Awareness of Students as Financial Technology Users in Indonesia - *Nurul Fathiya, Athirah Fanesa, Andra Amelia, Putri Mentari, Candiwan (PIO #042)...137*
27. House Price Prediction Using Linier Regression - *Noviyanti T M Saga/a, Laura Hestia Cendriawan (PIO #045)...143*
28. IoT-based tire pressure monitoring system for air and temperature pressure using MPX5500D and LM35 sensor - *Agung Pangestu, Iing Sodikin, Muhammad Yusro, Rum Sapundani, Rosyid Ridlo Al Hakim, Sinka Wilyanti (PIO #048)...148*
29. Experimental Light Concrete Using Coarse Aggregate of Cigarette Waste and Tree Branches Combination Masterpel-725 - *Paikun, Isdaryanto Iskandar, Daniel Arie Susanto, Rakha Farhan Sunarlan, Danang Purwanto (PIO #049)...152*
30. Preservation of Kasepuhan Traditional House Culture to Maintain Unesco Global Recognition Ciletuh Geopark - *Richa Rahmaliya Sunhadji, Se/fin Anugrah Amdani, Sofa Lailatul Ma'rifah, Muhamad Deva Prayoga, Paikun, Dio Damas Permadi (PIO #050)...158*
31. Cervical Cancer Identification using Deep Learning Approaches - *Shien Nie Kong, Dini Oktarina Dwi Handayani, Hou Kit Mun, Pei Pei Chong, Teddy Mantoro (PIO #054)...164*
32. Students' Perspectives on 'PeVe App' to Learn English Phrasal Verbs - *Melania Wiannastiti; Teguh Prasandy; Yi Ying; Kryst/ MO Liem, Wiwik Andreani, Endang Ernawati (PIO #055)...168*
33. Classification of Paddy Leaf Disease Using MobileNet Model - *Fauzan Masykur, Kusworo Adi, Oky Dwi Nurhayati (PIO #058)...173*
34. Proposed Factors That Affecting The Use Of Mobile Payment Qr Code On Micro Small Medium Enterprises as a Business Intermediaries - *Aloysius Bagas Pradipta Irianto, Pisit Chanvarasuth (PID #059)...177*

35. A Comparative Study of Different Boosting Algorithms for Predicting Olympic Medal - *Noviyanti TM Saga/a, Muhammad Amien Ibrahim (PIO #060)...183*
36. Intelligent Traffic Management System using Internet of Things: A Systematic Literature Review - *Hendra Marcos, Rahmat Gernowo, Isnaini Rosyida, Oky Dwi Nurhayati (PIO #061)...187*
37. Fluid Speed Detector Using Impulse Detection with Two Load Cells and NodeMCU ESP8266 - *Anang Suryana, Adi Mulyadi, Egi, Ridwan Maulana, Aryo De Wibowo Ms and /Iman Himawan Kusumah (PIO #063)...193*
38. Design and Analysis of Static Stress on Hydraulic Table Dies Replacement -*Abdul Wahid Arohman, Desy Agustin, Hasan Sudrajat, Muhamad Agus, Solihin, Muhammad Rizqi Akbar (PIO #064)...198*
39. Single Image Perspective Grid System on Floor Surface for 2D to 3D transformation - *Danna Rusjdi, Edi Abdurachman, Yaya Heryadi and Gede Putra Kusuma (PIO #066)...203*
40. User Experience Measurement of ERebana Application using User Experience Questionnaire - *Arief Hidayat, Fandy Indra Pratama, Jeni Nadik (PIO #067)...209*
41. Augmented Reality-Based Learning Media for Simple Distillation Practical Apparatus - *Suchika Rahmadona Vakasari, Ida Farida, Ferli Septi Irwansyah (PIO #068)...214*
42. Design and Implementation of a Magnetic Hybrid Stationary Bike for Self-Generation of Electricity- *Jalaludin, M Taupik Rijki, Khoerul Anam, Aryo De Wibowo MS (PIO #086)...219*
43. System Architecture and Dataset ASEAN Entrepreneurship Profiling Website - *Yasinta Indrianti, Sasmoko, Fredy Pumomo, Mohd Khairuddin bin Ramly (PIO #111)...224*
44. Implementation of an expert system in diagnosing obstetrical health in pregnant women using fuzzy algorithms and certainty factor - *Munawaroh, Niki Ratama, Diki Rasapta, Septa, Syndhe Qumaruw Syty, Octaviana Anugrah Ade Purnama (PIO #113)...229*
45. Augmented Reality Application for Book Detection with Google Colaboratory and SnapML Lens Studio - *Ga'uh Saputri, Joko Suwamo, Achmad Lutfi Fuadi, Agus Heri Yunial (PIO #117)...235*
46. Security System In The Safe With The Personal Identification Method Of Number Identification With Modulo Arthmatic Patterns - *Aripin Triyanto, Ariyawan Sunardi, Woro Agus Nurtiyanto, Moch Koiru Ikhsanudin, Mardiansyah (PIO #118)...241*
47. Automatic Storage of Goods on Moving Conveyors Using Fuzzy Logic Method - *Mardiansyah, Donie Agus Ardianto, Cahyo Dwi Buono, Ariyawan Sunardi (PIO #119)...247*
48. Robust Implementation of ICN-based Mobile IoT for Next Generation Network - *Cutifa Safitri, Quang Ngoc Nguyen, Media Anugerah Ayu and Teddy Mantoro (PIO #120)...253*
49. Identifying Bottlenecks of Hierarchical Process Model by Using Discrete Event Simulation and Process Mining - *Abdullah Faqih Septiyanto, Riyanarto Samo and Kelly R. Sungkono (PIO #121)...258*
50. Analysis of Information Technology Governance on Process Management Services and Management of Information Technology Security Using COBIT 2019 (Case Study: PT XYZ) - *Keysha Salsabila Saputra, Maulidia Isnaini, Tasya Agrefine Saragi, Siti Mariam, Candiwan (PIO #124)...264*
51. Information Security Awareness Evaluation of Telemedicine Application Users using Human Aspect Information System Questionnaire - *Nasha Salsabila Destya Ananta, Candiwan Candiwan, Puspita Kencana Sari, Osa Omar Sharif (PIO #125)...270*
52. Federated Deep Learning for Automated Detection of Diabetic Retinopathy - *Nadzurah Zainal Abidin, Amelia Ritahani Ismail (PIO #127)...276*
53. Development of Conceptual Design for RSG-GAS Computing Circuit Reactor Protection System - *Syaiful Bakhri, Ojak Abdul Rozak, Farrellio Gasperado, Adzra Cakrawarti Anindita, Muhammad Rofiqurrahman (PIO #129)...281*

54. Twitter Tweet: Sentiment Analysis on Illegal Investment using Naive Bayes Algorithm - *Anisa Sholihat, Fathurachman Bei, Regina Ainaya, Arny Lattu and Falentino Sembiring (PIO #130)...287*
55. Comparison of Classification Data Mining Models In Predicting Heart Disease In Europe - *Dudih Gustian, Rian Nugraha, Adriansyah Muhamad Alfaudzan, Austin Almayda (PID #132)...292*
56. A Data Analysis Technique to Find the Environmental Effect on Egg Production in the Poultry Farm Using ML and IoT -*Ayesha Siddika, Md Anowar Hossen Faysal, Md Rase/Ahmed, Md Masudur Rahaman, Mohammad Ali, Md. Ferdouse Ahmed Foysal (PIO #134)...297*
57. A Cost-Effective IoT Device for Protecting People from the Dangers of Environmental Risk in Bangladesh - *Mahmuda Mahfuz Rimi, Md Rase/ Ahmed, Sakhawat Hossan, Md Masudur Rahaman, Md Anowar Hossen Faysal, Md. Ferdouse Ahmed Foysal (PIO #135)...303*
58. Design of Rooftop Panel Performance Monitoring System using Power and External Parameter - */Iman Himawan Kusumah, Putri Oktaviani, Eka Muhammad Haryadi, Panca Adhi Darmawan, Aryo De Wibowo, Anang Suryana, Nur Hidayah Kusumaningrum Fadhilah, Meutia Riany, Siti Sarah Sobariah Lestari (PIO #137)...308*
59. Analysis of Factors Affecting Acceptance of Audit Software for External Auditor During Pandemic of Covid 19 - *Bambang Leo Handoko (PIO #141)...313*
60. Indonesia's Economic Recovery Post Covid-19 Pandemic Sentiment Analysis -*Adhitia Erfina, Lakoa Fitina, Prasetyo Hartanto, Sudin Saepudin, Diah Rahmalenia, Dini Maulinda, Fauziah Nur Ocktafiani (PIO #142)...319*
61. Optimizing the Performance of UAV-Based Searching Missing Persons Process Using Deep Learning - *Hina Javed, Teddy Mantoro, Umar Aditiawarman (PIO #143)...323*
62. Neutralizing City's Cyber Infrastructure through the launch of Second Wave SYN-Flood Attacks - *Caleb Lipan, Teddy Mantoro, Media Anugerah Ayu (PIO #145)...329*
63. Malware Detection with Obfuscation Techniques on Android Using Dynamic Analysis - *Teddy Mantoro, Daniel Stephen, Wandy Wandy (PIO #146)...334*
64. Comparative Performance of Convolutional Neural Networks Architecture for Face Biometric Authentication System - *Noor Azwana Mat Ariff, Amelia Ritahani Ismail, Normaziah Abdul Aziz (PIO #149)...340*
65. Optimal Solution for Data Storage Security in Cloud Computing (OSDSS-CC) -*Alaya Al Azzani, Abdullah Alkalbani (PIO #150)...344*
66. Effective of Obfuscated Android Malware Detection using Static Analysis - *Teddy Mantoro, Muhammad Elky Fahriza, Muhammad Agni Catur Bhakti (PIO #151)...349*
67. Analysis of the Metaverse in Society 5.0 for Learning Systems using Meta - *Teddy Mantoro, William Hazkel Tarigan, Media Anugerah Ayu (PIO #152)...354*
68. Random Forest Classifier Evaluation in DDoS Detection System for Cyber Defense Preparation - *Zaidan Fadh/urohman Faruq, Teddy Mantoro, Muhammad Agni Catur Bhakti, Wandy Wandy (PIO #154)...359*
69. Historical Study of The Development of The Misuse of Biological Weapons Technology- *Dian Agustin, Teddy Mantoro, Ivan Yulivan (P/O #156)...364*
70. Patient Data Security in Telemedicine Services from Data Misuse in Health Practice - *Sinka Puji Yuninda, Satriani Aga Pasma, Teddy Mantoro (PIO #157)...370*
71. Integration of Government Regulations to Anticipate the Threat of Terrorism with Radioactive and Nuclear Technology- *Mega Agustina, Teddy Mantoro, Rika Wijayanti, Armi Susandi (PIO #159)...374*
72. Private Data Protection as Countermeasure Against Misuses of Medical Intelligent Technology Data: a Literature Study- *Praseptiadi, Pratama Dahlian Persadha, Armi Susandi, Teddy Mantoro (PIO #161)...380*
73. Misuse of Electronic Medical Records in Blockchain Technology Intelligence Security System - *Mire/Wattimena, Dwi Retnowati, Teddy Mantoro (PIO #162)...386*

74. Prevention of Misuse of Information Technology in the Health Industry - *Hastanto Januar Ahmad, Teddy Mantoro, Ivan Yulivan (PIO #166)...391*
75. Applications of Artificial Intelligence and Big Data for Strengthening the Role of Intelligence in Human Security - *Ahmad Shahrul Mubarak, Armi Susandi, Teddy Mantoro (PIO #167)...396*
76. Regulatory Support to Prevent Health Data Breaches - *Wannanto Firmansyah, Teddy Mantoro, Pratama Dah/ian Persadha (PIO #168)...401*
77. Analysis on The Cyber Attacks in Indonesia's Health Sector in Industry 4.0 Era - *Arif Hidayat, Teddy Mantoro, Armi Susandi (PIO #170)...405*
78. Assessing Students' Information Security Awareness through the Knowledge, Attitude, and Behavior Model - *Madina Malahayati Chumaera, Safitri, Media Anugerah Ayu (PIO #173)...411*
79. Improving Early Detection and Prevention of Depression Using an Interactive Mobile App - *Daniel Stephen, Akbar Aryasatya Attal/ah, Media Anugerah Ayu (PIO #174)...417*
80. Bert Transformer Model for Indonesian Mood Music Dataset - *Thoyyibah T, Edi Abdurachman, Yaya Heryadi and Amalia Zahra (PIO #181)...423*
81. Towards the Development of Affective Recognition Using Heart Sound Signal: A Proposal - *Zeldi Suryady, Abdul Wahab, Dini Oktarina Dwi Handayani (PIO #182)...427*
82. An Empirical Study on the Role of Work Ethics and Emotional Intelligence on Software Engineers' Work Performance and Job Satisfaction - *Shafia Khatun, Norsaremah Sal/eh (PIO #183)...433*
83. Beat: Heart Monitoring Application - *Afif Fanshuri Shamsu/nizam, Iskandar Zulkarnain Basri, Noor Azura Zakaria, Taniza Tajuddin, Zeldi Suryady (PIO #184)...439*
84. A Review of 5G Technology: Architecture and Challenges - *Zainab S Attarbashi, Abdulazeez E. Altaleb, Azana Hafizah Mohd Aman, Aisha Hassan Abdalla Hashim, Sebahattin Eker (PIO #185)...445*
85. Evaluating Usability of Learning Disability Assessment System - *Putri Sakinah Fikriah Harnum Junaidi, Nur Amira /mi, Noor Azura Zakaria, Ruwinah Abdul Karim, Muhannan Lubis, Mazidah Mat Rejab (PIO #188)...449*
86. Improved Malware Detection Results using Visualization-Based Detection Techniques and Convolutional Neural Network- *Putu Sukma Dharmalaksana, Teddy Mantoro, Lutfil Khakim, Much/is Nurseno (PIO #189)...455*