

2023 IEEE 13th International Conference on Control System, Computing and Engineering (ICCSCE 2023)

**Penang, Malaysia
25-26 August 2023**



**IEEE Catalog Number: CFP2314R-POD
ISBN: 979-8-3503-2319-1**

**Copyright © 2023 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:	CFP2314R-POD
ISBN (Print-On-Demand):	979-8-3503-2319-1
ISBN (Online):	979-8-3503-2318-4

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

	Page
<i>Table of Contents</i>	
<i>Organizing Committee</i>	
<i>Reviewers</i>	
<i>Paper Title & Authors</i>	
Android Based Mobile Information and Management Application for University Er Kang Seng, Heshalini Rajagopal and Shayla Islam	1
Energy-Saving Wireless Bidirectional People Counter with Notification and Data-Storing Systems Marc Joshua Rivera, Deiscart D’Mitrio C. Maceda, Andrew G. Bitancor, Leonardo C.Sawal, Rose Ann R. Blaqueza, Natalie Joy dJ. Dazo and Hannah Faye L. Sabillo	7
Explosive Blast Prediction using MLP Network based Training Algorithm Muhamad Hadzren Mat, Prakash Nagappan, Syahrull Hi-Fi Syam Ahmad Jamil, Fakroul Ridzuan Hashim, Khairol Amali Ahmad and Kamsani Kamal	12
MLP Network Prediction for Blast Explosive based Training Algorithm Prakash Nagappan, Muhamad Hadzren Mat, Syahrull Hi-Fi Syam Ahmad Jamil, Fakroul Ridzuan Hashim, Muhammed Alias Yusof and Mohd Sharil Salleh	17
Implementation of Identification of Voltage Sag Location in Distribution Network with Harmonic Alif Irfan Kamaruddin, Kamarulazhar Daud, Ahmad Asri Abd Samat, Saodah Omar, Ahmad Puad Ismail and Zainal Hisham Che Soh	22
Exploring Blockchain for KYC: Deepening Client Understanding Muhammad Akmal Anuar, Akram M. Zeki and Adamu Abubakar	27
Construction of the Shewhart Median Chart Based on the Expected Percentile Run Length Z. L. Chong, W. L. Teoh, H. W. You, W. C. Yeong and M. B. C. Khoo	33
The Bigger Picture: Scene Understanding for Recognizing Accidents within Mixed-Traffic Scenario using Deep Learning Fu Swee Tee, Lau Bee Theng, Brian Loh Chung Shiong and Mark Tee Kit Tsun	39
Structural Similarity Assessment of Business Process Graph Using GED-Greedy Kristina, Ary Mazharudin Shiddiqi, Daniel Siahaan and Hidayatul Munawaroh	45
Rainfall Classification Model for the Philippines using Optimized K-nearest Neighbor Algorithm with GridSearchCV Hyperparameter Tuning Deiscart D’Mitrio C. Maceda and Jennifer C.Dela Cruz	51
A Comparison of Deep Learning for Software Features Extraction in Forensic Online News Fredrikus Suarezsaga, Daniel Siahaan and Anny Yuniarti	56

Parametric Assessment of Communication Protocol for Evaluating the Efficacy of Real-Time Healthcare Data Transmission System	62
Azwati Azmin, Samihah Abdullah and Wan Rahiman	
Analysis of Imagined Speech Characteristics using Phase-based Connectivity Measures	68
Meenakshi Bisla and R. S. Anand	
Comparison of Prostate Cell Image Classification Using CNN: ResNet-101 and VGG-19	74
Yessi Jusman	
OptimRSEG: An Optimized Semantic Road Segmentation Model	79
Audrey Huong, Kim Gaik Tay, Xavier Ngu, Wan Mahani Hafizah Wan Mahmud and Nur Anida Jumadi	
Comparative Study between Horn-Schunk and Lucas Kenade Optical Flow Method for Lung Lesion Identification in Computed Tomography Images	84
Mohd Firdaus Abdullah, Siti Noraini binti Sulaiman, Muhammad Khusairi Osman, Noor Khairiah A. Karim, Adi Izhar Che Ani and Dayang Suhaida Awang Damit	
User's Acceptance and Intention of Blockchain Technology with UTAUT 3 Model: Beneficial or Detrimental in the Indonesian Banking Industry	89
Sintya Lasma Putri Br Panjaitan, Stevi Chartinie Valiyenty and Ignatius Edward Riantono	
FSCS with Error Sharing based on Alpha Weights for Improving Accuracy of Reconstructed Images	95
Eri Suzuki, Takuto Yamauchi and Kenji Tei	
Optimizing Network Classification Performance by Geometric Transformations on Delayed Enhancement Cardiac Magnetic resonance imaging	101
Dayang Suhaida Awang Damit, Siti Noraini Sulaiman, Muhammad Khusairi Osman, Noor Khairiah A. Karim, Belinda Chong Chiew Meng and Mohd Firdaus Abdullah	
Hybrid Modal-Machine Learning Approach for Structural Damage Diagnosis	106
Pei Yi Siow, Zhi Chao Ong and Shilei Chen	
Fruit Quality Detection and Monitoring System	111
Md Maruf Kamran Sohag, Mohammad Ashfaq Ur Rahman, Muhtasim Ibteda Shochcho, Md.Ridwan Mahmud, Daiyan Mohammad Shams, Mysya Samiha, Mohammad Rejwan Uddin and Mahady Hasan	
A Review on Performance of Various Types of Brain-Computer Interface	115
Bahareh Nazar Hosseini Saber and Reyhaneh Nazar Hosseini Saber	
Pain Classification Using Statistical Feature Extraction Using Machine Learning Approach: A Pilot Study	121
Sudimanto, Agung Trisetyarso, Iman Herwidiana Kartowisastro and Widodo Budiharto	
Simulation and Analysis of Piezoelectric Energy Harvesting Device: Effects of Applied Weight on Output Voltage	126
Ahmad K. A, Muhamad Faizal Abd Rahman, Muhammad Khusairi Osman, Muhammad Adha Muhamad Idin, Rozan Boudville, Saiful Zaimy Yahaya, Mat Nizam Mahmud and Abdullah N.	
Stepwise Comparison for Minimizing Controller Makespan	132
Yuki Shimizu, Takanori Hirano, Takuto Yamauchi and Kenji Tei	
Exploring the Effectiveness of GRU Model with SIELU Activation Function for Water Quality Classification	138
Abdullahi Abdi Abubakar Hassan, Nordiana Rahim, Rozaida Ghazali and Norhanifah Murli	

Effects of Pre-Processing and Principal Components for Artificial Neural Network in Non-Destructive Internal Quality Prediction of Mango across Different Harvest Periods	144
Yit Peng Tan and Kim Seng Chia	
Classification Performance of Directed Acyclic Graph Network on Potential Dyslexia Handwriting Images	149
Siti Azura Ramlan, Iza Sazanita Isa, Muhammad Khusairi Osman, Ahmad Puad Ismail and Zainal Hisham Che Soh	
Plant Disease Detection and Segmentation using End-to-End YOLOv8: A Comprehensive Approach	155
Syed Asif Ahmad Qadri, Nen-Fu Huang, Taiba Majid Wani and Showkat Ahmad Bhat	
ID155	161
Pre-controller Synthesis for Runtime Controller Synthesis	
Yuki Arioka, Takuto Yamauchi and Kenji Tei	
Application of Geometric Features on Lung Lesion and Non-Lesion Segmentation	167
Nurul Najiha Jafery, Siti Noraini Sulaiman, Muhammad Khusairi Osman, Noor Khairiah A. Karim, Zainal Hisham Che Soh, Mohd Firdaus Abdullah and Iza Sazanita Isa	
A Comparative Performance of Genetic Algorithm and Bayesian Optimization for Hyperparameter Tuning for Mammogram Classification	173
Noor Fadzilah Razali, Iza Sazanita Isa, Siti Noraini Sulaiman, Noor Khairiah A. Karim, Muhammad Khusairi Osman, Zainal Hisham Che Soh and Zakiah Mohd Yusoff	
Human Action Recognition (HAR) using Image Processing on Deep Learning	179
Ahmad Puad Ismail, Muhammad Afiq Azahar, Nooritawati Md Tahir, Kamarulazhar Daud and Nazirah Mohamat Kasim	
Luminance Based Detection of Adulterated Honey using Machine Learning	184
Alia Qamelia Mohd Zuber, Nur Hazliza Ariffin and Sabiran Abubakar	
Uncertainty Based Approach of Commercial TOU Tariff	190
Muhammad Luqman Hakim Muhammad Rizal, Nor Adni Mat Leh, Zuraida Muhammad, Shabinar Abdul Hamid and Yusnita Mohd Ali	
Optimal Finite-Time Prescribed Performance of Servo Pneumatic Positioning with PID Control Tuning using an Evolutionary Mating Algorithm	196
Addie Irawan, Mohd Herwan Sulaiman and Mohd Iskandar Putra Azahar	
An Automated Blastocyst Grading System Using Convolutional Neural Network and Transfer Learning	202
Yusuf Abas Mohamed, Umi Kalsom Yusof, Iza Sazanita Isa and Murizah Mohd Zain	
Fusing Frontal Face Recognition Using Multi View Cameras	208
Rashidan M. A., Sidek S. N. and Al-Samman M. M.	
An Automated Day 3 Embryo Grading Based on Morphological Characteristics Using CNN with Transfer Learning Techniques	214
Faisal Kevin Alkindy, Umi Kalsom Yusof and Murizah Mohd Zain	
Implementation of Artificial Intelligence Chatbot in Semiconductor Manufacturing to Optimize Overall Equipment Effectiveness	220
Siu Hong Loh, Vincent Jascha Jeuk, Jia Jia Sim and Kim Ho Yeap	
A Comparative Study on COCOMO II Model for Cost Estimation	226
Rahmi Rizkiana Putri, Daniel Siahaan and Chastine Fatichah	

Water Level Control in Boiler System Using Self-tuning Fuzzy PID Controller	232
Zuraida Muhammad, Syahmin Hamka Ahmad Dziauddin, Shabinar Abd Hamid and Nor Adni Mat Leh	
A Recent Assessment for the Ransomware Attacks Against the Internet of Medical Things (IoMT): A Review	238
Tamara Nusairat, Madihah Mohd Saudi and Azuan Ahmad	
Maximum Demand Peak Shave Approach Utilising a Hybrid Solar PV and Battery Energy Storage System	243
Intan Rahayu Ibrahim, Muhammad Naqib Azman, Nur Atharah Kamarzaman and Rosheila Darus	
A State-of-the-Art AF-HIDOP: A Model for Daily Covid-19 Infectious Disease Outbreak Spread Risk Prediction	249
Moataz Billah M. Fayad, Mansour Youseffi, Jian-Ping Li and Mahadi M. Abdul Jamil	
Optimization of Saleman Travelling Problem Using Genetic Algorithm with Combination of Order and Random Crossover	255
Muhammad Firdaus Shafie, Fadzil Ahmad, Muhammad Khusairi Osman, Ahmad Puad Ismail, Khairul Azman Ahmad, Saiful Zaimy Yahaya, Mohaiyedin Idris and Anwar Hassan Ibrahim	
Analysis of Centroid Position to Measure the Distance of People in the Crowd	259
Slamet Riyadi, Cahya Damarjati, Hesti Media Tama and Siti Noraini Sulaiman	
A Study on the Rotation Motor Correlation between Sound Signal and IMU Sensor	265
Ekkawit Wangkanklang, Nitas Suriyakan and Yoshikazu Koike	
An Optimized Hybrid Dragonfly Algorithm Applied for Solving the Optimal Reactive Power Dispatch Problem in Smart Grids	269
Bibi Aamirah Shafaa Emambocus, Muhammed Basheer Jasser, Shamuhammet Rejepov, Hui Na Chua, Ahmad Sahban Rafsanjani and Ismail Ahmed Al-Qasem Al-Hadi	
Disturbance Forces Compensation in Machine Tools using Robust Controller	275
Yit Chang Lee, Tsung Heng Chiew, Yoon Ket Lee, Kai Ming Chang, Jia Jan Ong and Yeh Huann Goh	
Development of an IoT-based Fish Farm Monitoring System	281
Siu Hong Loh, Peh Chiong Teh, Guang Yang Goay and Jia Jia Sim	
Frontal Face Tracking in the Thermal Infrared Imaging for Autism Spectrum Disorder Children	287
Rashidan M. A., Sidek S. N., Yusof H. M., Ghazali A. S. and Rusli N.	
A Framework to Support the Delivery and Assessment of Practical-Based Concepts on Online Learning	293
Amal Al-Abri, Moza Al-Balushi, Fatma Al-Shemali and Nooritawati Md Tahir	
Problem Understanding of Fake News Detection from a Data Mining Perspective	297
Hui Na Chua, Qaisar Khan, Muhammed Basheer Jasser and Richard T. K. Wong	
Prediction the Number of Lamps Required for the Lighting System According to the JKR Lux Standards by Using the Artificial Neural Network Method	303
Nuzul Lokmanhakim Zulkifli, Mohamad Adha Mohamad Idin, Samshul Munir Muhamad, Ahmad Asri Abd Samat, Khairul Azman Ahmad and Noorezal Atfyinna Mohd Napiah	
Design and Implementation of 3-bit Calculator for an ALU using Vertical and Crosswise Multiplication	309
Suresh Rasappan, Gunasekaran Thangavel, Rafeek Ahmed S., Ahamed Nishath S., Musab A. M. Ali and Nooritawati Md Tahir	

Security Analysis of DNP3 Protocol in SCADA System	314
Qais Saif Qassim, Musab A. M. Ali and Nooritawati Md Tahir	
Development And Evaluation of Wireless Oxygen Saturation Monitoring System	320
Muhammad Amar Haziq Mohd Karia, Shabinar Abdul Hamid, Samihah Abdullah, Zuraida Muhammad, Solahuddin Yusuf Fadhlullah and Nor Adni Mat Leh	
Improving Performance of Photovoltaic Solar Pumps Using PSO-Based Maximum Power Point Tracking	326
Mohamad Zaid Nordin, Siti Sarah Mat Isa, Ahmad Asri Abd Samat, Nornaim Kamarudin, Muhammad Eillieyin Mohd Ghazali and Aimi Idzwan Tajudin	
Learning Rate Optimization for Enhanced Hand Gesture Recognition using Google Teachable Machine	332
Safyzan Salim, Muhammad Mahadi Abdul Jamil, Radzi Ambar, Wan Suhaimizan Wan Zaki and Suraya Mohammad	
Empowering Small and Medium Enterprises with Data Analytics for Enhanced Competitiveness	338
Aissa Mosbah, Musab A. M. Ali and Nooritawati Md Tahir	
Emergency Rescue Alert and Notification System for Madrasah (ERANO-MAD)	343
Nur Liyana Erny Ahmad Khairan, Muhammad Mahadi Abdul Jamil, Wan Suhaimizan Wan Zaki, Radzi Ambar and Mohd Helmy Abd Wahab	
IoT Based Domestic Water Piping Leakage Monitoring and Detection System	348
Rozan Boudville, Muhamad Haikal Hakimi, Muhammad Zaim Kamal Abdul, Khairul Azman Ahmad, Saiful Zaimy Yahaya and Nurul Izza Husin	
Development of Sensory Unit Using Single IMU Sensor for Knee Joint Movement	353
K. A. Kamaruzaman, S. Z. Yahaya, E. Noorsal, R. Boudville, F. Ahmad and Z. H. Che Soh	
On the Universality of Active Noise Control Concepts in Control Engineering: A Perspective in Control Engineering Education	358
Raja Kamil	
Modeling and Control of Unmanned Aerial Vehicles (Quadcopter)	364
Tan Kai Sheng and Mohd Fua'ad Rahmat	
Author's Index	370