2022 12th International Conference on System Engineering and Technology (ICSET 2022)

Bandung, Indonesia 3-4 October 2022



IEEE Catalog Number: CFP2275P-POD

ISBN: 979-8-3503-1984-2

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:
 CFP2275P-POD

 ISBN (Print-On-Demand):
 979-8-3503-1984-2

 ISBN (Online):
 979-8-3503-1983-5

ISSN: 2470-6396

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



TABLE OF CONTENT

PREFACECOMMITTEE	iii iv
Design and Implementation of IMU, BLE Proximity, and GPS-Based Theft Detection System Muhammad Ogin Hasanuddin, Reihan Augeetiansyah, Gotawa Aryo Prakoso and Beni Rio Hermanto	1
Implementation of Progressive Web App-Based Applications for Vehicle Tracking Systems Muhammad Ogin Hasanuddin, Andaru Purwarangga Arham, Gotawa Aryo Prakoso and Beni Rio Hermanto	6
Gamification of Animal Recognition Learning for Children with Deaf in Elementary School Using Dance Pad Media Endah Sudarmilah, Azie Melasari, Devi Afriyantari Puspa Putri, Wiwien Dinar Pratisti and Fatah Yasin Irsyadi	13
Panoptic Segmentation Datasets for Rail-based Autonomous Vehicle Under Mixed-traffic Scenario Dhimas Bintang Kusumawardhana, Bambang Riyanto Trilaksono and Harits Abdurrohman	19
Design and Development of a Daily Recording System for Vocational High School Field Work Practice Participants Asep Trisna Setiawan, Rahadian Yusuf and Ary Setijadi Prihatmanto	25
Performance Study of LoRa IoT Technology Liya Yuni Astutik and Rahadian Yusuf	31
Deep Reinforcement Learning to Automate Cryptocurrency Trading Dimitri Mahayana, Elbert Shan and Muhammad Fadhl Abbas	36
Improving Radar-Camera Fusion-based 3D Object Detection for Autonomous Vehicles Irfan Tito Kurniawan and Bambang Riyanto Trilaksono	42
Predicting Price Movement of the BTCUSDT Pair Using LightGBM Classification Modeling for Cryptocurrency Trading Dimitri Mahayana, Shafa Amarsya Madyaratri and Muhammad Fadhl Abbas	48
Linear Quadratic Gaussian using Kalman Network and Reinforcement Learning for Discrete-Time System Adi Novitarini Putri, Carmadi Machbub, Dimitri Mahayana and Egi M. Idris	40
Hidayat	54

Evaluation of Fuzzy PID controller design for coffee roasting temperature regulation
Mohamad Taib Miskon, Mohd Hezri Fazalul Rahiman and Mohd Nasir Taib
Rainfall Nowcasting based on Satellite Images using Convolutional Long-Short Term Memory Beatrice Connie Majang, Norliza Zaini and Lucyantie Mazalan
Design and Implementation of Drowsiness Detection System Based on Standard Deviation of Lateral Position Muhammad Ogin Hasanuddin, Hafizha Novianingrum and Eniman Yunus Syamsuddin
Modeling Domestic Solar Generation Profile by Using Elbow and K-Means Clustering Techniques Hanis Nasuha Amer, Mohd Fuad Abdul Latip and Norliza Zaini
Online Learning Facial Expression Detection using Simplified AlexNet Deep Learning Architecture: Image Data Samples Comparison Experiment Andhika Rahadian and Rahadian Yusuf
Scholarship Recipients Prediction Model using k-Nearest Neighbor Algorithm and Synthetic Minority Over-sampling Technique Dede Kurniadi, Fitri Nuraeni, Nia Abania, Leni Fitriani, Asri Mulyani and Yoga Handoko Agustin
Design and Analysis of IoT-based Aquarium Monitoring System for Guppy Fish Habitats Yuslinda Wati Mohamad Yusof, Murizah Kassim and Noor Aniq Noor Azlan
Hybrid Feature Selection with K-Nearest Neighbors for Optimal Heart Failure Detection Rizal Dwi Prayogo and Siti Amatullah Karimah
Template-Based Supervised Deep Homography Estimation Based on SqueezeNet Poppy Luscovius Purba and Carmadi Machbub
IoT Device Control with Offline Automatic Speech Recognition on Edge Devidce Panji Setiawan and Rahadian Yusuf
AUTHORS INDEX