

2021 International Conference on Artificial Intelligence and Big Data Analytics (ICAIBDA 2021)

**Bandung, Indonesia
27 – 29 October 2021**



**IEEE Catalog Number: CFP21AX9-POD
ISBN: 978-1-6654-0891-2**

**Copyright © 2021 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:	CFP21AX9-POD
ISBN (Print-On-Demand):	978-1-6654-0891-2
ISBN (Online):	978-1-6654-0890-5

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

ADABOOST SUPPORT VECTOR MACHINE METHOD FOR HUMAN ACTIVITY RECOGNITION.....	1
<i>Intan Nurma Yulita, Erick Paulus, Asep Sholahuddin, Dessy Novita</i>	
SENTIMENT CLASSIFICATION AGAINST THE PUBLIC ACTIVITY RESTRICTIONS POLICY IN JAKARTA USING MACHINE LEARNING MODELS	5
<i>Dennis Dennis, Yudhistira Nugrahaa, Andi Sulasikin, Farhan Adham Irawan, Clarissa Febria Finola, Fajar Kurniawan, Juan Intan Kanggrawan, Alex L. Suherman</i>	
AUTOMATIC TEXT SUMMARIZATION WITH CATEGORIZATION ON ONLINE NEWS ABOUT INDONESIAN PUBLIC FIGURES USING FUZZY LOGIC METHOD	10
<i>Sigi Kemahduta, Sari Widya Sihwi, Wisnu Widiarto</i>	
DYNAMIC TOPIC TRACKING AND VISUALIZATION USING COVID-19 RELATED TWEETS IN MULTIPLE LANGUAGES	16
<i>Riki Murakami, Basabi Chakraborty, Yukari Shiota</i>	
SENTIMENT ANALYSIS ON TELEMEDICINE APP REVIEWS USING XGBOOST CLASSIFIER.....	22
<i>Khansa Afifah, Intan Nurma Yulita, Indra Sarathan</i>	
SENTIMENT ANALYSIS OF YOUTUBE VIDEO COMMENTS WITH THE TOPIC OF STARLINK MISSION USING LONG SHORT TERM MEMORY	28
<i>Ayu Masyita Putri, Daniel Ananda Putra Basya, Muchammad Teguh Ardiyanto, Indra Sarathan</i>	
INDONESIAN FOOD PRICE PREDICTION WITH ADAPTIVE NEURO FUZZY INFERENCE SYSTEM	33
<i>Sheila Azhar Almufarida, Rahma Batari, Akik Hidayat, Anindya Apriliyanti Pravitasari</i>	
SENTIMENT ANALYSIS OF INDONESIA’S NATIONAL HEALTH INSURANCE MOBILE APPLICATION USING NAÏVE BAYES ALGORITHM.....	38
<i>Natalia Syafitri Kustanto, Intan Nurma Yulita, Indra Sarathan</i>	
FORECASTING INFLATION IN INDONESIA USING LONG SHORT TERM MEMORY.....	43
<i>Farah Fauziah Savitri, Reski Febrianti Siregar, Feevrinna Yohannes Harianto, Herlina Napitupulu</i>	
FACE RECOGNITION USING FISHERFACE AND SUPPORT VECTOR MACHINE METHOD	50
<i>Syachrul Qolbi Nur Septi, Intan Nurma Yulita, Herlina Napitupulu</i>	
STROKE RISK PREDICTION MODEL USING MACHINE LEARNING.....	56
<i>Nugroho Sinung Adi, Richas Farhany, Rafidah Ghina, Herlina Napitupulu</i>	
THE EFFECT OF FACIAL ATTRIBUTES IN IDENTIFYING GENDER USING FACIAL RECOGNITION.....	61
<i>Athallah Muhammad Ariq, Yunardi Denni Tri, Zharief Dhiya Uzh, Herlina Napitupulu</i>	
ANALYSIS OF PREDICTION DATA FOR THE THIRD WAVE OF COVID-19 IN BOGOR REGENCY	66
<i>Alfian Fadhil Labib, Difa Bagasputra Maulana, Sina Mustopa, Intan Nurma Yulita, Mulya Nurmansyah Ardisasmita, Dwi Agustian</i>	

CLASSIFICATION OF WATER POTABILITY USING MACHINE LEARNING ALGORITHMS.....	71
<i>Muhammad I'Tikafi Khoirul Haq, Fauzian Dwi Ramadhan, Fatimah Az-Zahra, Linda Kurniawati, Afrida Helen</i>	
COMPARATIVE STUDY OF J48 DECISION TREE CLASSIFICATION ALGORITHM, RANDOM TREE, AND RANDOM FOREST ON IN-VEHICLE COUPONRECOMMENDATION DATA	76
<i>Dicky Rahma Hermawan, Mohamad Fahrio Ghani Fatihah, Linda Kurniawati, Afrida Helen</i>	
COMPARISON OF ADOLESCENT VACCINATION DATA ACCURACY BY URBAN VILLAGE IN DKI JAKARTA PROVINCE IN JULY 2021 USING SEVERAL DATA MINING METHODS.....	82
<i>Nadine Annisa Heartman, Yuela Thahira, Ruth Rebecca Ovelin, Afrida Helen</i>	
IMPLEMENTATION OF DATA WAREHOUSE IN MAKING BUSINESS INTELLIGENCE DASHBOARD DEVELOPMENT USING POSTGRESQL DATABASE AND KIMBALL LIFECYCLE METHOD	88
<i>Paquita Putri Ramadhani, Setiawan Hadi, Rudi Rosadi</i>	
TWITTER'S HATE SPEECH MULTI-LABEL CLASSIFICATION USING BIDIRECTIONAL LONG SHORT-TERM MEMORY (BILSTM) METHOD	93
<i>Refa Annisatul Ilma, Setiawan Hadi, Afrida Helen</i>	
COVID-19 SOCIAL SAFETY NETS SENTIMENT ANALYSIS ON TWITTER USING GATED RECURRENT UNIT (GRU) METHOD.....	100
<i>Junia Adhani, Intan Nurma Yulita, Asep Sholahuddin, Mulya Nurmansyah Ardisasmita, Dwi Agustian</i>	
COVID-19 DETECTION IN CHEST X-RAYS USING INCEPTION RESNET-V2	104
<i>Raihan Badrahadipura, Syachrul Qolbi Nur Septi, Julio Fachrel, Intan Nurma Yulita, Anindya Apriliyanti Pravitasari, Dwi Agustian</i>	
PREPROCESSING APPLICATION FOR CAR INSURANCE CLAIM CLASSIFICATION MODEL.....	110
<i>Farhan Gunadi, Muhammad Fauzi, Bagas Firdaus, Afrida Helen</i>	
MARKET BASKET ANALYSIS ON SALES TRANSACTIONS FOR MICRO, SMALL AND MEDIUM ENTERPRISES USING APRIORI ALGORITHM TO SUPPORT BUSINESS PROMOTION STRATEGY IN RDA HIJAB.....	115
<i>Aulia Ghassani Nabila, Intan Nurma Yulita, Ino Suryana, Mira Suryani</i>	
INDONESIAN ABUSIVE TWEET CLASSIFICATION BASED ON CONVOLUTIONAL NEURAL NETWORK AND LONG SHORT TERM MEMORY METHOD	121
<i>Reinaldo Yosafat Gultom, Fahri Izzuddin Zulkarnaen, Yahma Nurhasanah, Asep Sholahuddin</i>	
PREDICTION NEW CASES OF COVID-19 IN INDONESIA USING VECTOR AUTOREGRESSION (VAR) AND LONG-SHORT TERM MEMORY (LSTM) METHODS	127
<i>Daffa Rahmansyah Danistya, Fahira Qaulifa, Yovi Adhi Ramadani, Intan Nurma Yulita, Mulya Nurmansyah Ardisasmita, Dwi Agustian</i>	
APPLICATION OF BIDIRECTIONAL GATED RECURRENT UNIT (BIGRU) IN SENTIMENT ANALYSIS OF TOKOPEDIA APPLICATION USERS	131
<i>Dimas Ananda, Teguh Ammar Taqiyyuddin, Ihyen Nugraha Faqih, Raihan Badrahadipura, Anindya Apriliyanti Pravitasari</i>	

ADAPTIVE NEURO-FUZZY INFERENCE SYSTEM FOR PREDICTING STOCK PRICE OF ITMG ISSUER	135
<i>Anne Audistya Fernanda, Aprischa Nauva Miliantari, Akik Hidayat, Anindya Apriliyanti Pravitasari</i>	
A COMPARISON OF SUPPORT VECTOR MACHINE AND NAÏVE BAYES CLASSIFIER IN BINARY SENTIMENT REVIEWS FOR PEDULILINDUNGI APPLICATION	140
<i>Isal Firmansyah, Mohammad Hamid Asnawi, Syifa Auliyah Hasanah, Rafly Novian, Anindya Apriliyanti Pravitasari</i>	
UTILIZATION OF DATA WAREHOUSE IN BUSINESS INTELLIGENCE WITH KIMBALL METHOD AT COMPANY XYZ.....	146
<i>Muhammad Himami, Atje Setiawan Abdullah, Intan Nurma Yulita, Mira Suryani</i>	
DYNAMIC CHANNEL ALLOCATION TECHNIQUE FOR COGNITIVE RADIO BASED UAV NETWORKS	152
<i>Md Sabbir Hosen, Yunfeng Peng</i>	
PERFORMANCE ANALYSIS OF MOBILE BROADBAND NETWORKS IN IBRA CITY, OMAN.....	156
<i>Majan Abdullah Al Jahdhami, Ayman El-Saleh, Abdulraqueb Alhammadi, Ibraheem Shayea</i>	
A NEW TELE-HEALTHCARE SYSTEM OF HEART SOUND SIGNAL CLASSIFICATION BASED ON GATED RECURRENT UNIT.....	162
<i>Eka Sari Oktarina, Noor Akhmad Setiawan, Igi Ardiyanto</i>	
DIAGNOSIS OF AGLAONEMA PLANT DISEASE USING FORWARD CHAINING AND NAIVE BAYES METHODS	168
<i>Heliza Rahmania Hatta, Riswandi Syam, Dedy Cahyadi, Anindita Septiarini, Novianti Puspitasari, Masna Wati</i>	
INDONESIAN DIGITAL WALLET SENTIMENT ANALYSIS USING CNN AND LSTM METHOD	173
<i>Ananda Affan Fattahila, Fendi Irfan Amorokhman, Kaenova Mahendra Auditama, Kurniadi Ahmad Wijaya, Ade Romadhony</i>	
OPTIMIZATION OF FUZZY SUPPORT VECTOR MACHINE (FSVM) MODEL IN MULTIPLE METRIC SPACES	179
<i>Dita Fadma Ristianti, Sugiyarto Surono, Joko Eliyanto</i>	
OUTLIER DETECTION USING K-MEANS CLUSTERING WITH MINKOWSKI-CHEBYSHEV DISTANCES FOR INQUIRY-BASED LEARNING RESULTS IN STUDENTS DATASET.....	186
<i>Endang Wahyuni, Sugiyarto Surono, Joko Eliyanto</i>	
DEEP LEARNING IN IMAGE CLASSIFICATION USING DENSE NETWORKS AND RESIDUAL NETWORKS FOR PATHOLOGIC MYOPIA DETECTION	191
<i>Zein Rasyid Himami, Alhadi Bustamam, Prasnurzaki Anki</i>	
TRANSFER LEARNING-BASED MOBILE-FOCUSED AUTOMATED COVID-19 DETECTION FROM CHEST X-RAY	197
<i>M. Aldiki Febriantono, Ridho Herasmara, Anita Rahayu</i>	

THE IMPACT OF LARGE-SCALE SOCIAL RESTRICTION AND ODD-EVEN POLICIES DURING COVID-19 PANDEMIC TO TRAFFIC CONGESTION AND AIR POLLUTION IN JAKARTA.....	202
<i>Muhamad Fahriza Novriansyah, Yudhistira Nugraha, Hansen Wiguna, Andy Ernesto, Andi Sulasikin, Bahrul Ilmi Nasution, Juan Intan Kanggrawan, Alex L. Suherman</i>	
SIMULATION OF A DECISION SUPPORT SYSTEM USING DATA MINING METHOD WITH C4.5 ALGORITHM: A CASE STUDY.....	208
<i>Faizal Sudrajat, Rachmadita Andreswari, Nia Ambarsari</i>	
SEARCH SYSTEM FOR TRANSLATION OF AL-QUR'AN VERSES IN INDONESIAN USING BM25 AND SEMANTIC QUERY EXPANSION.....	214
<i>Arif Rhizky Gilang Purnama, Intan Nurma Yulita, Afrida Helen</i>	
MULTI-LABEL CLASSIFICATION FOR SCIENTIFIC CONFERENCE ACTIVITIES INFORMATION TEXT USING EXTREME GRADIENT BOOST (XGBOOST) METHOD	221
<i>Cryssa A. E. Piter, Setiwan Hadi, Intan Nurma Yulita</i>	
PREDICTION OF STOCK PRICE DATA OF PT. RAMAYANA LESTARI SENTOSA TBK. USING LONG SHORT TERM MEMORY MODEL.....	226
<i>Luki Setiawan, Nurul Fathanah Muntasir, Syafa Fahreza, Asep Sholahuddin</i>	
DESIGN OF MUSEUM HISTORICAL HERITAGE MANAGEMENT SYSTEM USING BLOCKCHAIN DIGITAL CERTIFICATE AND HYPERLEDGER COMPOSER.....	231
<i>Sachi Hongo, R. Sudrajat, Intan Nurma Yulita</i>	
ELECTRONIC NEWS SENTIMENT ANALYSIS APPLICATION TO NEW NORMAL POLICY DURING THE COVID-19 PANDEMIC USING FASTTEXT AND MACHINE LEARNING.....	236
<i>Rividya Permata Aluna, Intan Nurma Yulita, R. Sudrajat</i>	
SK-MOEFS MULTI-OBJECTIVE EVOLUTIONARY FUZZY SYSTEM LIBRARY EFFECTIVENESS AS USER-FRIENDLY CRYPTOCURRENCY PREDICTION TOOL.....	242
<i>Dio Satyaloka, Stacyana Giamiko, Akik Hidayat</i>	
THE EFFECT OF EDUCATIONAL BACKGROUND ON HIGH JOBS AND INCOME	247
<i>Sopia Virgin, Salma Luthfiyah Yulvi, Shafira Khoirunnisa, Linda Kurniawati, Afrida Helen</i>	
WAVELET NEURO-FUZZY SYSTEM (WNFS) IN PREDICTING THE EXCHANGE RATE OF THE RUPIAH AGAINST THE US DOLLAR	251
<i>Asep Budiyanu Muharam, Muhamad Farid Ridho Rambe, Muhammad Risqullah Sudanta, Akik Hidayat</i>	
TEXT CATEGORIZATION OF JOB VACANCY USING RECURRENT NEURAL NETWORK METHOD.....	256
<i>Sarah Hasna Azzahra, Intan Nurma Yulita, Akik Hidayat</i>	
TWITTER SOCIAL MEDIA SENTIMENT ANALYSIS OF TELECOMMUNICATIONS SERVICE PROVIDER USING LONG SHORT-TERM MEMORY METHOD	262
<i>Fauzi Faruq Nabbani, Intan Nurma Yulita, Ino Suryana</i>	
LQ45 STOCK PRICE PREDICTION USING LINEAR REGRESSION ALGORITHM, SMO REGRESSION, AND RANDOM FOREST	267
<i>Moch. Lutfi, Sheilla Putri Agustin, Intan Nurma Yulita</i>	

DATA MINING IMPLEMENTATION USING FREQUENT PATTERN GROWTH ON
TRANSACTION DATA FOR DETERMINING CROSS-SELLING AND UP-SELLING (CASE
STUDY: CASCARA COFFEE)..... 272
Aditya Rizky Fadillah, Intan Nurma Yulita, Aditya Pradana, Mira Suryani

Author Index