2026 International Conference on Advancement in Data Science, E-learning and Information System (ICADEIS 2026)

Bandung, Indonesia
23-24 June 2026

IEEE Catalog Number: CFP26W96-POD
ISBN: 979-8-3195-3356-2

IEEE
Advancing Technology for Humanity

Copyright © 2026, IEEE

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:	CFP26W96-POD
ISBN (Print-On-Demand):	979-8-3195-3356-2
ISBN (Online):	979-8-3195-3355-5

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

A CITIGOV-Based Assessment Tool for Service-Oriented Management 1
Alfarrel Daffa Mahadika, Fitriyana Dewi, Ryan Adhitya Nugraha

A Controlled Comparative Study of RAG and KG-RAG for Explainable Asset Maintenance Recommendations 9
Raden Daffa Firasyan Adikusumah, Sinung Suakanto, Ekky Novriza Alam, Edi Triono Nuryatno

A Data-Driven Analysis of User Reviews Using Transformer-Based Sentiment Classification and Topic Modeling: A Case Study of Strava 15
Abdul Majid, Muhammad Rayyan, Intan Rahmatillah

A Lightweight DenseNet Approach with MediaPipe Landmark Extraction for Lip-Reading 21
Noveria Clara Liufina, Irmawati

A Multi-Method Transformer-Based Approach to Decoding Visitor Sentiment in Southeast Asian Aviation Hubs 27
Puja Silaban, Dian Puteri Ramadhani

A National Sentiment Analysis of Social Media Discourse on Indonesia's Digital Rupiah: Navigating Algorithmic Spam Using Fine-Tuned IndoBERT 34
Farhan Solih, Alfian Akbar Gozali

Active Neural Network Intervention for Low-Level Feature Control in Vision Model Interpretability 40
Alexander Calvin, Laksmita Rahadianti

Advanced Pre-processing Framework for Segmentation-Free Cytology Classification on Whole Slide Images 48
Esron Rikardo Nainggolan, Dwiza Riana, Nita Merlina

Agentic AI for Data Quality: Probabilistic Pivot for Data Quality Management 54
Prakash Upadhyay, Mahendra Rajwade, NitinKumar Leuva, Sambit Dhar, Derek Palecek

An IoT-Enabled ESP32 System for Collective Cough Detection Using FFT and Threshold Techniques 60
Quinsha Aisyah Nuryadin, Nasyiah Mutia Azzahra. S, M. Aqila Nesha Tenripata Ahyar Andi Muhammad Rafan, Naila Zahra, Muh. Rusli Al

Analyzing the Michelin Star Impact Using BERT Sentiment Analysis and BERTopic 66
Alifya Faghain Zaifara, Ferry Indra, Ivan Diryana Sudirman

ARIMA-Based Time Series Forecasting of NO_2 Concentration for Early Pollution Detection 72
Maghda Luqyana, M. Yoka Fathoni, Yudha Islami Sulistya

Attention-Based LSTM Quantization for Edge Fall Detection Using Wearable Sensors 78
Arief Rahman, Aji Gautama Putrada, Sidik Prabowo

Evaluating Modern Backbone Architectures in Mask R-CNN for Fish Instance Segmentation Toward Automated Fish Species Identification 84
Tati Mardiana, Dwiza Riana, Muhammad Haris, Teguh Peristiawady

Beyond the Repeatable Level: Cultural Resistance and PDCA Disconnects in ITIL V4 Adoption within a Developing Economy 91
Muharman Lubis, Muhammad Fakhrul Safitra, Alif Noorachmad Muttaqin, Egi Al Fansyah Fadhil Rozi Hendrawan, Mima Artamevia

Budayana: Design and Usability Validation of a Bloom's Taxonomy-Based Cultural Literacy Quiz and Monitoring Dashboard for Elementary Schools 97
Mayla Fatima Putri Indra Yuana, Safara Cathasa Riverinda Rijadi, Mifta Ardianti

Budayana: Evaluating a Hybrid Architecture and Gamified Web-Based Literacy Platform to Enhance Student Reading Comprehension 103
Elvaretta Alexandra, Safara Cathasa Riverinda Rijadi, Mifta Ardianti

CatBoost for Worm Detectio n with The UNSW-NB15 Dataset using MDI-VAE for Solving Imbalanced Labels 109
Sultan, Aji Gautama Putrada, Ikke Dian Oktaviani

Comparative Evaluation of Imbalance-Aware Machine Learning Models for At-Risk Student Detection in Vocational Education 115
Muhammad Aris Ganiardi, Ermatita, Abdiansah

Comparative Study of Machine Learning, Transformer, and Generative Models for Sentiment Analysis 122
Adiartha Wibisono Hasnan, Brian Chaya, Alexander Agung Santoso Gunawan Jeffrey Junior Tedjasulaksana

Comparing Random Forest and LightGBM for Residential Property Price Prediction Using Multi-Platform Online Listings in Indonesia 128
Tristanto Wijaya, Gian Fiorentino Kapoh, Bagas Adnan Putra, Evander Banjarnahor

Comparison of IndoBERT and XLM-RoBERTa Performance in E-Commerce Product Review Sentiment Classification 134
Alfin Abrar Putra, Kemas Muslim Lhaksmana

Critical Responses in TED Talks YouTube Comments: A Dual-Model Sentiment and Topic Analysis 140
Muhammad Abel Al Rasyid, Rasya Vladya Alinur, Alexander Agung Santoso Gunawan Jeffrey Junior Tedjasulaksana

Cross-Lingual Semantic Search for Low-Resource Languages: A Case Study on Batak Toba Religious Texts using NLLB and LaBSE 147
Daniel Jahja Surjawan, Viny Christanti Mawardi, Merry Uli Artha Manurung

Cybersecurity Assessment Instrument for Government Institutions in Indonesia 155
Mohamad Arifandy, Kalamullah Ramli

Data Leakage Exploration on CICIDS2017 Dataset with SHAP-FSA and Ridge-XGBoost 161
Muhamad Rafdi Rostiadhi Pramana, Aji Gautama Putrada, Ryan Lingga Wicaksono

Data Mining: Correlation Analysis of Indonesian Political News Sentiment to Gold Price 167
Ida Bagus Yogesvara Vyad Chandra, Micheline Glenesia, Rodrick Felixson, Kenny Jingga

Designing a Continuous Value Optimization Assessment Tool for Public-Sector IT Governance 176
Indah Fitri Amelia, Fitriyana Dewi, Ryan Adhitya Nugraha

Designing an Integrated Cyber Risk Mitigation Based on Zero Trust Architecture: A Conceptual Framework for the Aerospace Industry 184
Stefanus Jesano Pramathana, Widyatasya Agustika Nurtrisha, Dhata Praditya

Designing Enterprise Architecture Guidelines for Intelligent Asset Appraisal and Product Recommendation in Pawnshop Operations 191
FarizRifqi. M, Iqbal Yulizar Mukti, Safara Cathasa Riverinda Rijadi

Detection of Nuchal Translucency (NT) and Fetal Nasal Bone (NB) in Down Syndrome Screening Using YOLOv11 198
Tamara, Fergie Joanda Kaunang, Richard Stefano, Angelina Pramana Thenata, Bhustomy Hakim

Development of a Comprehensive Data Center Maturity Measurement Instrument Based on DCMM and COBIT 2019 204
Nurcholis, Kalamullah Ramli

Discovering Latent Behavioral Learning Profiles in LLM-Assisted Education Using K-Means Clustering 212
Dina Angela, Sinung Suakanto, Alvin Santos Sicat, Friska Andalusia

EfficientNet-B0 with Class-Wise Temperature Scaling and Test-Time Augmentation for Brain Tumor Classification on 2D MRI 219
Abdurrahman Azzam, Bedy Purnama, Edward Ferdian

EmbeddingGemma Vs XLM-R Embedder for English-Indonesian Toxic Text Classification: Accuracy-Carbon-Latency Trade-Offs 227
Daniel Christopher Santoso, Aryo Bintang Prabowo, Andry Chowanda

Empirical Validation of an Integrated Adoption Model for Maternal Health Application Among Rural Pregnant Women in Indonesia 235
Rahmat Fauzi, Adhistya Erna Permanasari, Silmi Fauziati

Enhancement of Machine Learning Algorithms through Boosting for Multimodal Disease Analysis 242
Fitri Aini Nasution, Sarjon Defit, Syafri Arlis

Enhancing Armed Person Detection Using YOLOv11 and Rule-Based Pose Fusion in a Modular Framework 248
Naila Athaya Mumtaz, Bedy Purnama

Enhancing Diabetes Prediction on Imbalanced Data Using RM-SMOTE-Driven KNN Framework 254
Indah Manfaati Nur, Abdurakhman, Danardono

Enhancing Indonesian Sentiment Analysis via LLM Driven Sarcasm Detection and Ensemble Learning 261
Krisna Abhi Padhana, Indra Budi

Enhancing Motion Sensitivity in Dynamic Images for Facial Expression Recognition through GLINT: A Learnable Input-Level Gating Mechanism 267
Aida Hanifa, Ilham Syahrul Ramadhan, Irene Anindaputri Iswanto

Enhancing Stock Management Accessibility Through Voice Command Plugin: Architecture and Field Usability Evaluation 273
Raditya Pratama, Er Mahendrawathi

Enhancing XSS Attack Identification Through Character-Level Feature Engineering and Hyperparameter Optimization 280
Tegar Fadillah, Dedy Rahman Wijaya, Hanang Priambodo

Ensemble of XGBoost for Depression Level Classification using EEG Functional Connectivity in Mindfulness Based Cognitive Therapy (MBCT) 286
Ela Agustin, Santi Wulan Purnami, Wardah Rahmatul Islamiyah, Margarita Maria Maramis Saffanah Karimah

Evaluating Prompt Strategies for Multimodal Large Language Models in Indonesian Misogynistic Meme Detection 293
Endang Wahyu Pamungkas, Maryam, Rona Rizkhy Bunga Chasana, Dade Nurjanah, Ikhlasul Amal

Evaluating Sparse-Dense Hybrid Fusion Strategies on the Indonesian Mr. TyDi Benchmark 299
Mhd Afifan Aly Rahman Saragih, Evi Yulianti, Ika Alfina, Indra Budi

Evaluating Zero-Shot LLM Listwise Reranking and Hybrid Fusion using RankZephyr on Indonesian MIRACL Subset 307
Nurul Salsabila Syam, Evi Yulianti, Ika Alfina, Kurniawati Azizah

Evaluation of User Acceptance Toward AI-Driven Educational Systems for Mandarin Language Acquisition 315
Malahayati Hazimah, Bhustomy Hakim, Wilinda Yosalim, Sharell Michelle Jessalynn Santoso, Ivan Japutra Merryana Lestari

Explainable Continuous Reinforcement Learning for Adaptive Battery Dispatch in Tropical Microgrids 323
Puguh Hiskiawan, Srava Chrisdes Antoro, I Gede Agus Purwa, Ferdiantono, Chellynia Cristabel Hery Heryanto

Explainable Deep Learning for Multiclass Eye Fundus Disease Classification 328
Almira Zahra Aurelia, Irmawati

Exploring People Perception of Deepseek OpenSource Model on X Social Media Using Sentiment Analysis 335
Darren Christian, Evaristus Didik Madyatmadja

Forecasting Shor-term Electricity Load of East Java Province using Functional Regression Time-varying Coefficient Model 341
Paskalis Sinurat, Muhammad Sjahid Akbar, Irhamah

Forensic Artifact Parser for Android Fitness Applications 348
Lii'Zza Aisyah Putri Sulistio, Hudan Studiawan, Baskoro Adi Pratomo

From Vacancies to Insights Topic Prediction and Emerging Skill Trends in LinkedIn Online Job Ads 355
Ririn Saprina Kadang, Cathrine Monica Sutanto, Alexander Agung Santoso Gunawan Jeffrey Junior Tedjasulaksana, Lili Ayu Wulandhari

Hybrid Fuzzy C-Means (FCM) and Active Contour Method for Melanoma Segmentation 362
Yudha Andriano Rismawan, Nur Iriawan, Kartika Fithriasari

Hybrid LSTM and CNN Model for Multivariate Prediction of SO2 Air Quality in Cilacap, Indonesia 369
Rindi Indah Lestari, M. Yoka Fathoni, Arif Riyandi

Hybrid Transformer–GRU Architecture for Time Series Forecasting of Dengue Incidence 374
Marnis Nasution, Yuhandri, Gunadi Widi Nurcahyo

Identification of Entities Potentially Involved in Corruption in Criminal Networks using SeHGNN 380
Muhammad Shafa Praramadhana, Kemas Rahmat Saleh Wiharja

Identifying Innovation Directions in Web-Based Event Management Systems Through Bibliometric Analysis 386
Ainaira Dianisa Santoso, Sasmi Hidayatul Yulianing Tyas, Puji Rahayu

Implementation of a Gamified Web-Based One-to- One Mathematics E-Learning Platform for High School Students 392
Kevin Purnomo, Kelvin, Harco Leslie Hendric Spits Warnars

Improving Accuracy of Motorcycle Odometer Digit Recognition Using YOLOv10-Enhanced EasyOCR 398
Afifah Khaerani Aziz, Marzuki Pilliang

IndoBERT-Based Sentiment Analysis of Indonesia-US Data Transfer Policy Using XGBoost and SGDClassifier 404
Dedi Gunawan, Galardhia Zain Azzahral, Reinal Ariyuda, Mohamed Saidu Jalloh, Zidni Khoirul Rizqi Rahadatul Aisy Tsamarah Ilyas

Indonesian Sarcasm Detection on X Platform Using IndoBERTweet: The KaburAjaDulu Case 410
Necha Agmeyla Tama, Rita Rismala, Untari Novia Wisesty

Integrating Derived Features and SMOTE-Tomek Link for Early Detection of Diabetes Mellitus Using General Checkup Data 416
Rafi Suwargana Putra, Nur Ghaniaviyanto Ramadhan, Azka Khoirunnisa

Integrating Network Science and TransformerBased Opinion Mining in West Nusa Tenggara Destinations 422
Rafila Zhilal Hasanudin, Dian Puteri Ramadhani

Intelligent Information System for Underground Parking Management: Real-Time Vehicle Tracking and Flow Counting 428
Faqih Hamami, Ahmad Musnansyah

Interpretable Deep Forest for High-Dimensional DNA Methylation Analysis in Prostate Cancer Staging 433
Azhar Farras, Shofi Andari, Santi Wulan Purnami, Putri Wikie Novianti

Learning Analytics for Inclusive E-Learning, AI Applications and Governance Gaps 441
Yustika Erliani, Purwanto Purwanto, Puji Rahayu, Normala Rahim

Machine Learning-Based Classification of Toddler Nutritional Status: Analysis of Feature Importance and Approaches to Data Imbalance 447
I Gede Made Ari Ananta, Riska Yanu Farifah, Rahmat Fauzi

Machine Learning-Based Pediatric Nutritional Intervention Recommendation using Multimodal Anthropometric, Sanitation, and Social Vulnerability Data 453
Muhammad Yoga Isnaeni, Riska Yanu Fa'Rifah, Rahmat Fauzi

Machine Learning-Based Pricing Models for the Indonesian Used Car Market: A Comparative Study of Three Regression Approaches 459
Evander Banjarnahor, Matthew Abednego Inkiriwang, Gabriello Sabian, Calvin Setiawan, Marvin Potu

Motivational Theories in Mobile-Based E-Waste Recycling 465
Nornajihah Nadia Hasbullah, Ag Kaifah Riyard Kiflee, Ahmad Fadhly Arham, Saiful Anwar

Multi-Source Data Integration for Enhanced Scam Token Detection in Solana Blockchain 471
Rhema Galih Kurnia, Ahmad Nurul Fajar

Near Real-Time Detection of Facial Microexpressions Using YOLO–CNN–LSTM Hybrid Model 479
Sabrina Aulia Rahmah, Ramzi Adriman, Fitri Arnia, Kahlil

Optimizing LLM Chatbot to Human Handover with Multi-Agent AI Approach 485
Muhammad Fadhil Amri, Sunu Pinasthika Fajar, Muhammad Habibi Ramadhan
Muhamad Saad Nurul Ishlah, Rijalul Fikri, Ganjar Widiatmansyah

Optimizing Siamese Networks for One-Shot Signature Verification: Contrastive Vs Triplet Loss 491
Carrissa Gloria Herman, Alexander Agung Santoso Gunawan, Jeffrey Junior Tedjasulaksana

Performance Analysis of Fibonacci-Based Dynamic Neural Network for Imbalanced Data Classification 498
Muhammad Ardiansyah Sembiring, Syahril Efendi, Mohammad Andri Budiman, T.Henny Febriana Harumy

Pneumonia Detection System with GAN-based Augmentation in Chest X-Ray Images Using Hybrid CNN-SVM 503
Monica Widiasri, Joko Siswantoro, Calista Valentina Shen

Prediction of Gallstone Disease Using Interpretable, Probabilistic, and Deep Learning Models for Tabular Data 509
Joel Edward Arung La'by, Dustin Bijou Arasy, Shamgar Eugene T'sidkenu Widjaja, Diana

Public Perception and Sentiment toward Rupiah Redenomination on Social Media Using IndoBERT 516
Ria Pebrian Dini, Alfian Akbar Gozali

Quantum Annealing Based Load Balancing Optimization in Software Defined Networking Architectures 522
Welnof Satria, Ramzi Adriman, Teuku Yuliar Arif, Syahrial Syahrial

Soil Condition Classification in Melon Root Zones Using Support Vector Machine 530
Ahmad Wali Satria Bahari Johan, Rizky Fenaldo Maulana, Agus Sulistya

The Influence of Technostress on ChatGPT Adoption in Gen Z Learning: A Diffusion of Innovation (DOI) Perspective 536
Khilyah Nafisah, Muhardi Saputra, Haryasena Panduwiyasa

Topic Modeling of Parent-Triggered Mental Health Complaints on Indonesian Social Media Using Latent Dirichlet Allocation 543
Muhammad Handra Haq, Dita Pramesti, Hanif Fakhrurroja

Topographic SCS+C Correction for Burned-Area Segmentation: A Multi-Index Evaluation Using Landsat 550
Annisaa Nurul Ramadhani Novelika, Salsabilah Aulia Rahman, Laksmita Rahadianti

Toward Lightweight Defense Against Compromised-Client Poisoning in Vertical Federated Learning: A Proposed Framework for Financial Fraud Detection 557
Andri Rifky Aditama, I Gde Dharma Nugraha

Advancing Generative AI Adoption in Education: Extending the UTAUT Framework 562
Alifiansyah Arrizqy Hidayat, Tita Ayu Rospricilia, Nur Azizah Rosidah, Ramadhani Vanva Fauzia
Ian Mahendra Putra

Understanding Mobile Commerce App Ratings through Topic Modeling and Regression Analysis: Evidence from Zalora Reviews 570
Yoseph Lie Allan, Ivan Diryana Sudirman

Understanding Student Experiences with NotebookLM: A Qualitative Study 575
Mona Mesfer Alshardan, Nazik Alturki, Sarah Alturki, Mohammad Amin Kuhail

User Adoption of an AI-Enabled E-Counseling Platform in West Java: A DOI Approach with Privacy-Security Trust Mediation 580
Daniel Sebastian Saragih, Haryasena Panduwiyasa, Widiya Febriyani

User Experience Analysis of C-Access Commuter App Using Aspect-Based Sentiment Classification 587
Febi Imanuela, Hasiana Emanuela Rajagukguk, Rifki Hidayatullah, Yova Ruldeviyani

VLM-APMatch: A Vision-Language Model Framework for Cross-Document Matching and Reconciliation in Accounts Payable 593
Mikael Kevin, Dodi Sudiana

When Stress Meets System: A Preliminary PLS SEM Validation of Technostress Integration into IS Success Model in SAP ERP Environments 599
Sheila Deninta Maharani, Muhardi Saputra, Widyatasya Agustika Nurtrisha

XGBoost with Optuna Hyperparameter Tuning for Competency Gap Prediction: A Benchmark Models for E-Learning Analytics 606
Ruktin Handayani, Udisubakti Ciptomulyono, Ratna Sari Dewi

YOLO-Pose and ViTPose for Contactless Assistive Pediatric Monitoring: Pipeline with Generalization XAI 613
Muhammad Al Husaini, Vito Hafizh Cahaya Putra, Cuk Tho, Hen Hen Lukmana, Agung Rachmat Raharja Muhammad Sidiq Asyaky