

2025 22nd International Joint Conference on Computer Science and Software Engineering (JCSSE 2025)

**Chiang Mai, Thailand
2-5 November 2025**

IEEE Catalog Number: CFP2532P-POD
ISBN: 979-8-3315-7359-1



Copyright © 2025, 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:	CFP2532P-POD
ISBN (Print-On-Demand):	979-8-3315-7359-1
ISBN (Online):	979-8-3315-7358-4
ISSN:	2372-1642

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 CONTENTS

LoomLen: A Real-Time Collaborative Note-Taking Application for Mobile and Tablet Devices	1
<i>Pisit Thitiakkarasak, Tawat Suriyo, Supakorn Jensawaspong, Sansiri Tarnpradab</i>	
Predicting Location Suitability Using Machine Learning on Uncertain Data	9
<i>Sorrawit Nuernuam, Pakin Suwannop, Kritsana Treechalong</i>	
M-BurnScar: Temporal-Based Burnt Scar Profiling for Modelling Risk of Forest Fires in ASEAN Countries	14
<i>Surapol Vorapatratorn, Nontawat Thongsibsong, Kampanat Deeudomchan, Tossapon Boongoen, Natthakan Iam-On, Jittisak Yodcum</i>	
Thai Tune: Enhancing Communication for Deaf through Technological Integration	22
<i>Ramita Deeprom, Kittipich Aiumbhornsins, Burit Sihabut, Thanapon Noraset, Pawitra Liamruk</i>	
A Comparative study of D-Wave's Quantum Hybrid Solvers: BQM vs CQM on Combinatorial Optimization	30
<i>Wiwat Asawalertsak, Prapong Prechaprapranwong, Rajchawit Sarochawikisit</i>	
Deceive, Detect, and Defend: A Multi-Layered Approach to Adaptive Ransomware Mitigation	37
<i>Napatr Sawamipak, Supagarn Pattananuchart, Punnaphat Chiangpradit, Adirut Lertthirathanaphong, Somchart Fugkeaw</i>	
M-GenCheck: Detecting Portrait AI-Generated Images Using Deep Learning in a Streamlit Web Application	44
<i>Nontawat Thongsibsong, Thanpaht Chaichombhoo, Surapol Vorapatratorn</i>	
A Semantic-Based Model for Course Recommendation Aligned with Desired Knowledge	50
<i>Sittha Sinprasat, Dussadee Praserttitipong</i>	
Design and Development of a User-Centric Dashboard and Mobile Interface for Real Time Municipal Wastewater Monitoring System	56
<i>Thongchai Yooyativong, Sujitra Arwatchananukul, Chayapol Kamyod, Prasara Jakkaew, Catarina Magdaleno Roquette, Taksakorn Sittiwong</i>	
Machine Learning-Driven Prediction and Analysis of Mental Health Risks Among University Students	60
<i>Soontarin Nupap, Hnin Oo Wai, Nyein Nyein Kyaw, Zaw Shin Thant, Nilubon Kurubanjerdjit</i>	
Improving Speaker Identification Capability by using Combined Handcrafted and Deep Learning Features	67
<i>Sunny Kawinseksan, Panyanat Aonpong</i>	
Cross-Domain Collaborative Filtering Recommendation without Overlapping Users and Items	75
<i>Areeporn Tupwong, Rangsipan Marukat</i>	
Thai Fake News Detection with LLM Integration for Web Application	81
<i>Napat Chansawang, Sirikarn Aueamornsuk, Titipon Phunmongkon, Sansiri Tarnpradab</i>	
A Hybrid Sentiment Analysis Approach for Hotel Reviews Using Lexicon-Based Sentiment Labelling and Machine Learning	89
<i>Nyein Pyae Sone, Nang Hom Phong, Htet Lyan Win, Nilubon Kurubanjerdjit, Soontarin Nupap, Patcharaporn Panwong</i>	

Segmentation Approach for Automated Solar Coronal Holes Monitoring Leveraging YOLOv8-seg	95
<i>Rungnapa Kaewthongrach, Kewalee Srithongtae, Sittiporn Channumsin, Setthanun Thongsuwan</i>	
Formal Verification and Web-Based Assessment for ISO/IEC 29110 Using Colored Petri Nets	101
<i>Warunton Sirikrajai, Nuengwong Tuaycharoen, Wiwat Vatanawood</i>	
Designing a Gamified Learning Platform to Foster Engagement in Higher Education	108
<i>Thiri Swe Zin, Yoon Moh Moh Aung, Ah Phar, Htet Lin Aung, Nang Hsu Mon Pyae</i>	
The Design of a Data Management System Using Line OA for Sustainable Waste and Recyclable Materials Management on Islands	114
<i>Kemachart Kemavuthanon, Samatthachai Yamsa-Ard, Panate Manomaivibool, Korn Mengamphan Tanut Seub-Ai</i>	
GSOD-KD: Knowledge Distillation for Lightweight and Accurate Object Detection in Space Situational Awareness	120
<i>Kewalee Srithongtae, Borirak Kittrattana, Purin Tanirat, Sittiporn Channumsin, Setthanun Thongsuwan</i>	
Thai Stock Chart Pattern via Deep Learning-Based Multi-Indicator Object Detection	128
<i>Bhattacharjee Wattanacheep</i>	
Application of MClique Network Analysis Bridging Between Personality and Career	133
<i>Nilubon Kurubanjerdjit, Swan Htet Htun, Aung Paing Oo, Nang Nway Zin Lynn Htet, Soontarin Nupap</i>	
Dynamic Inquiry System for Hospital Department Recommendation	139
<i>Aphivit Jirarattanamethakornt, Jaktikarn Puangtabtim, Virasin Archirapatkave, Naeromit Ridtiya Naruemon Wattanapongsakorn</i>	
ISRYOLO: Improving Small Object Detection in Aerial Imagery via Super-Resolution and Attention Fusion	144
<i>Nutt Ratanakul, Tukdanai Urumporn, Naveed Sultan, Santitham Prom-On</i>	
Awareness-Driven Detection and Prediction of Vehicles and Barriers	150
<i>Jirapat Watcharasing, Sasipa Panthuwadeethorn, Suphakant Phimoltare</i>	
Pseudo-Relevance Feedback with Deep Learning for Automated ICD-10 Coding	156
<i>Kitti Akkhawatthanakun, Lalita Narupiyakul, Konlakorn Wongpatikaseree, Narit Hnoohom Paisarn Muneesawang</i>	
Classification of Sugarcane Leaf Diseases Using Vision Transformers and CNN Models	164
<i>Piyanuch Silapachote, Ananta Srisuphab, Kongphob Wutthiumphol, Yotsapat Tanprathumwong Tachin Pohboonchuen</i>	
Comparative Study of Ensemble Learning for Predictive Maintenance in HDD Manufacturing	169
<i>Saisuda Nantalek, Sarayut Nonsiri, Annop Monsakul</i>	
Parallel Retrieval of DNA Sequences Based on Stretch Profile Indexing	175
<i>Supattra Muenthong, Siranee Nuchitprasitchai, Sucha Smachat</i>	
An Interactive Visualization System for Historical and Forecast Weather Data in Sugarcane Fields	181
<i>Sukanya Chansamorn, Auttanit Wongjak, Wichaya Somgiat, Yotsapat Ruangpaisarn</i>	
Language-Agnostic Framework for MCI Detection Using Whisper-Based Acoustic Features	186
<i>Nyi Nyein Aung, Naruemon Pratanwanich</i>	

Open API Testing Using Large Language Models and Prompt Engineering	193
<i>Phyu Thet Thet Kyaw, Arthorn Luangsodsai, Pattarasine Bhattarakosol</i>	
Battery Profile-Aware Optimization of EV Charging Schedules Using Machine Learning	199
<i>Kanokporn Panchansingh, Prachaya Udomparichatr, Peerapon Vateekul, Kultida Rojviboonchai</i>	
Predicting Tentative Centers of Dense and Hollow Clusters Without Distance and Information Analysis	205
<i>Baiyin Yan, Chidchanok Lursinsap</i>	
Evaluating the Efficacy of Machine Learning Techniques in Ransomware Detection	209
<i>Khoonpon Meechanchuang, Penpicha Sitsaengchai, Kanakorn Bowornsujaritkul, Suratose Tritilanunt Tanasinee Phienthrakul</i>	
An Integrated Stream Processing Framework for Secure and Fine-Grained Access Control in Healthcare IoT	217
<i>Vayuphak Saengthong, Chatdanai Wongsuwan, Nidhiwit Kunaputipo, Somchart Fugkeaw</i>	
Speech-GAN: Black-Box Attack against Automatic Speech Recognition Systems	225
<i>Faraz M M Mogal, Ali Osman Topal, Enea Mancellari, Volker Müller, Elmir Avdusinovic, Franck Leprévost</i>	
Attention-based Deep Survival Analysis for ALICE O ² Facilities	233
<i>Suthawee Weraphong, Vasco Chibante Barroso, Phond Phunchongharn, Peerapon Siripongwutikorn</i>	
Text Sentiment Analysis for Thailand Tourism Recommendation	240
<i>Ittichai Boonyarakthunya, Supannada Chotipant</i>	
Founder Traits, Geographical Presence, Gender Diversity, and Network Effects in Startup Exits: an AI-Based Empirical Study Using Crunchbase Dataset	248
<i>Laxman Gautam, Suresh Gautam, Bineet Sharma, Kismat Khatri, Or Manor</i>	
Comparison of Regression and Classification Models for Forecasting Thai Gold Prices	256
<i>Thinzar Htet, Nilubon Kurubanjerdtit, Soontarin Nupap, Tint Tint Htay</i>	
Detecting Implicit Aspects and Sentiment in Hotel Reviews via Hybrid Embedding Methods	262
<i>Jantima Polpinij, Thananchai Khamket, Chunpong Chan, Theeraya Uttha, Anirut Chothanom Jatuphum Juanchaiyaphum</i>	
Dormlander: a Smart Dormitory Management System with Utility Metering and Digital Payment Solution	269
<i>Songsri Tangsripairoj, Sirasan Srijirapattanakul, Thanapat Ritoluechai, Pattaradnai Kaedumkoeng</i>	
Mind Bloom: a Mobile Application for Mental Health Self-Care	277
<i>Songsri Tangsripairoj, Sujasinee Kodcharin, Hareuthai Autthasom, Keeratikorn Kumeak</i>	
A Gaussian Kernel Density Estimation-Regularized Particle Filter for Nonlinear State Estimation	284
<i>Sai Laung Kham, Nattapol Aunsri</i>	
BERT-FastText and BERT-BiLSTM Fusion for Chinese Hate Speech Detection	291
<i>Methini Ma, Arthorn Luangsodsai, Pakawan Pugsee</i>	
BZET-IAM: Enabling Blockchain-Based Zero Trust SSO for Dynamic Identity and Access Management	298
<i>Korn Dhampiban-udom, Natchanan Koson, Chonnawee Udompongpipat, Somchart Fugkeaw</i>	

Comparative Analysis of Unsupervised Approaches for Land Cover Identification in a Localized Region Using Sentinel-2 Spectral Data	306
<i>Theeraya Uttha, Jantima Polpinij, Chunpong Chan, Anirut Chothanom, Chumsak Sibunruang</i>	
<i>Thananchai Khamket</i>	
Investigating Employee Perceptions and Interactions with an Internal Enterprise Super App in the Thai Banking Sector: A Mixed-Methods Study	312
<i>Ananya Kumhan, Arthorn Luangsodsai</i>	
Relationship Patterns in Major Selection of Applicants in the TCAS System	319
<i>Phattharamon Phanphaeng, Sancha Panpaeng</i>	