Conference Program

18ᵗʰ IIAI International Congress on Advanced Applied Informatics

Venue: Kitakyushu International Conference Center, Kitakyushu, Japan
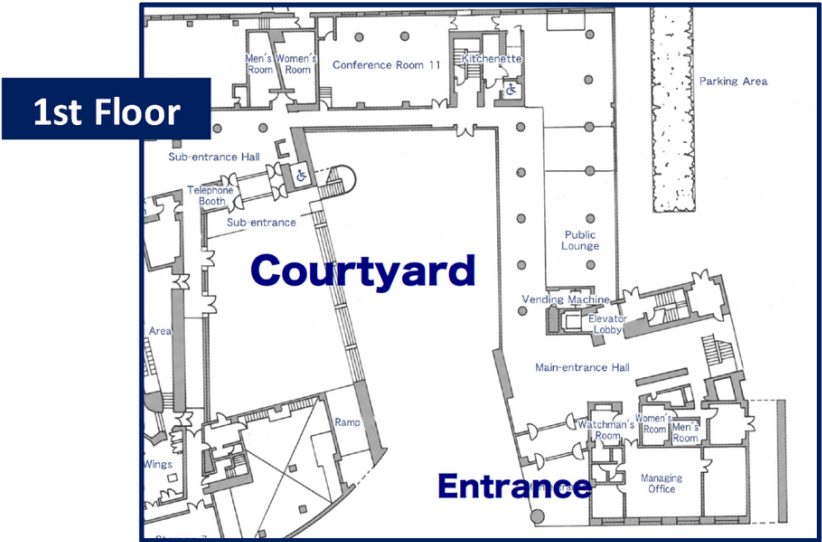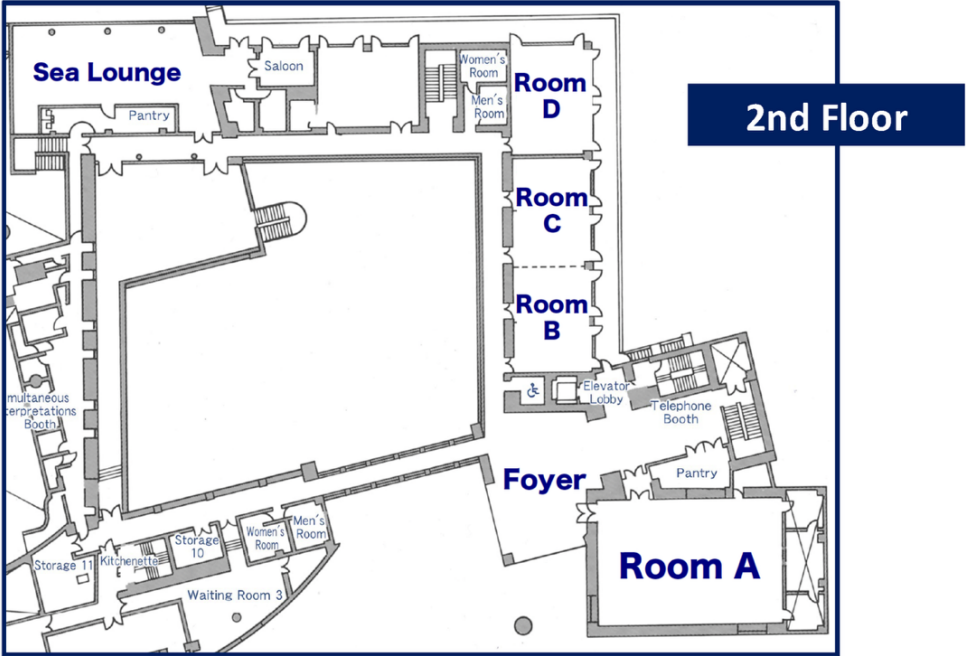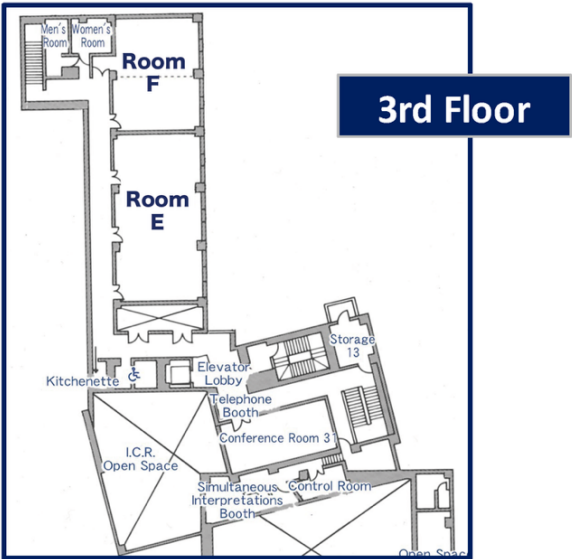
July 13-19, 2025, Kitakyushu Japan

Program at a Glance

18th IIAI International Conference on Advanced Applied Informatics (IIAI AAI 2025)

July 13-18, 2025, Kitakyushu International Conference Center, Kitakyushu, Japan

July 13 (Sun)

	Foyer	Room A	Room B	Room C	Room D	Room E	Room F
12:00PM-5:30PM	Registration						
1:00PM-2:40PM		SCAI-SS3-1	DSTM-SS3 + SBIT 1	DSIR-SS2-1 + ESKM 1	CDEF-SS2-1	N/A	N/A
2:40PM-3:00PM	Coffee Break						
3:00PM-5:05PM		SCAI-SS3-2	SCAI-SS3-3	DSTM-SS2	BMOT-SS2-1	N/A	N/A
4:30PM-5:30PM	Welcome Cocktail @ Sea Lounge						

July 14 (Mon)

	Foyer	Room A	Room B	Room C	Room D	Room E	Room F
9:15AM-5:00PM	Registration & Morning Coffee (9:15AM-10:00AM)						
9:30AM-11:35AM		SCAI 1	Business Center	BMOT-SS2-2 + BMOT 1	CDEF-SS2-2	N/A	N/A
11:35AM-1:00PM	Lunch on your own						
1:00-PM1:30PM	AAI 2025 Opening Ceremony at International Conference Center						
1:30PM-2:20PM	Keynote 1 at International Conference Room						
2:20PM-3:10PM	Keynote 2 at International Conference Room						
3:10PM-3:25PM	Coffee break						
3:25PM-5:30PM		N/A	Business Center	DSIR-SS2-2	CDEF-SS2-3	N/A	N/A
4:45PM-5:15PM		Poster setting	Business Center				
6:00PM-8:00PM	Welcome Reception + Poster Session						

July 15 (Tue)

	Foyer	Room A	Room B	Room C	Room D	Room E	Room F
9:15AM-5:00PM	Registration & Morning Coffee (9:00AM-10:00AM)						
9:30AM-11:35AM		SCAI 2	Business Center	SBIT 2	CDEF-SS1	ESKM-SS2-1	LTLE-SS2 + LTLE 1
11:35AM-1:00PM	Lunch on your own						
1:00PM-2:40PM		LTLE 2	Business Center	DSIR-SS1&SS4	BMOT-SS1 + BMOT 2	ESKM-SS2-2	ITCS
2:40PM-3:00PM	Coffee Break						
3:00PM-4:15PM		SCAI 3	Business Center	IDDC 1	ESKM-SS3 + ESKM 2	ESKM-SS2-3 + ESKM 3	ITCS
4:30PM-5:00PM	Bus departure from the courtyard for the banqute venue						
6:00PM-8:00PM	Conference Banquet						

July 16 (Wed)

	Foyer	Room A	Room B	Room C	Room D	Room E	Room F
9:15AM-5:00PM	Registration & Morning Coffee (9:00AM-10:00AM)						
9:30AM-11:35AM		SCAI-SS2&SS3	Business Center	LTLE 3	BMOT 3	DSTM 1	ITCS
11:35AM-1:00PM	Lunch on your own						
1:00PM-2:40PM		SCAI 4	Business Center	SBIT-SS1	BMOT 4	DSTM SS1-1	ESKM SS1 + ESKM 4
2:40PM-3:00PM	Coffee Break						
3:00PM-4:40PM		SCAI 5	Business Center	IDDC 2	CDEF-SS2-4 + CDEF 1	DSTM SS1-2	N/A
5:00PM-6:30PM	Ice cold beer and Wine Festival @ Courtyard						

July 17 (Thu)

	Foyer	Room A	Room B	Room C	Room D	Room E	Room F
9:15AM-5:00PM	Registration & Morning Coffee (9:00AM-10:00AM)						
9:30AM-11:35AM		SCAI 6	ESKM 5	LTLE 4	CDEF 2	N/A	N/A
11:35AM-1:00PM	Lunch on your own						
1:00PM-2:40PM		SCAI 7	LTLE 5	DSIR-SS3&SS5 + DSIR 1	CEDF 3	N/A	N/A
2:40PM-3:00PM	Coffee Break						
3:00PM-4:40PM		ESKM 6	SBIT 3	DSIR 2	LTLE 6	N/A	N/A
5:00PM-6:00PM	Farewel Reception @ Sea Lounge						

July 18 (Fri)

	Foyer	Room A	Room B + C	Room B + C	Room D	Room E	Room F
9:30AM-1:00PM		N/A	Online (Pysically broadcasted)		N/A	N/A	N/A

July 19 (Sat)

TBA	Board meeting						

Floor plan

3rd Floor

Men's Room
Women's Room
Room F
Room E
Storage 13
Kitchenette
Elevator Lobby
Telephone Booth
Conference Room 3
I.C.R. Open Space
Simultaneous Interpretations Booth
Control Room
Open Space

2nd Floor

Sea Lounge
Saloon
Pantry
Women's Room
Men's Room
Room D
Room C
Room B
Simultaneous Interpretations Booth
Elevator Lobby
Telephone Booth
Foyer
Pantry
Storage 10
Storage 11
Kitchenette
Women's Room
Men's Room
Waiting Room 3
Room A

1st Floor

Men's Room
Women's Room
Conference Room 11
Kitchenette
Parking Area
Sub-entrance Hall
Telephone Booth
Sub-entrance
Courtyard
Public Lounge
Vending Machine
Elevator Lobby
Area
Main-entrance Hall
Ramp
Wings
Watchman's Room
Women's Room
Men's Room
Managing Office
Entrance

Important Events and Social Events Summary

All registered participants are eligible to join in these events for free

SNS Competition

Participants who actively share their experiences will have the chance to win **special prizes** from IIAI at the Farewell Reception. Also, **outstanding influencers award** will be sent after the conference.

Welcome Cocktail at Sea Lounge, July 13 (Sun), 2025

Conference Opening Ceremony and Keynotes, July 14 (Mon), 2025

Welcome Reception and Poster Session, July 14 (Mon), 2025

Daily Technical Tour and Excursion (July 14-17, 2025)

- The person who would like to join in the daily technical tour (free for charge) can apply at the registration desk when the ticket is still available. Accompany person will be charged to join in. Please contact the registration desk officer.
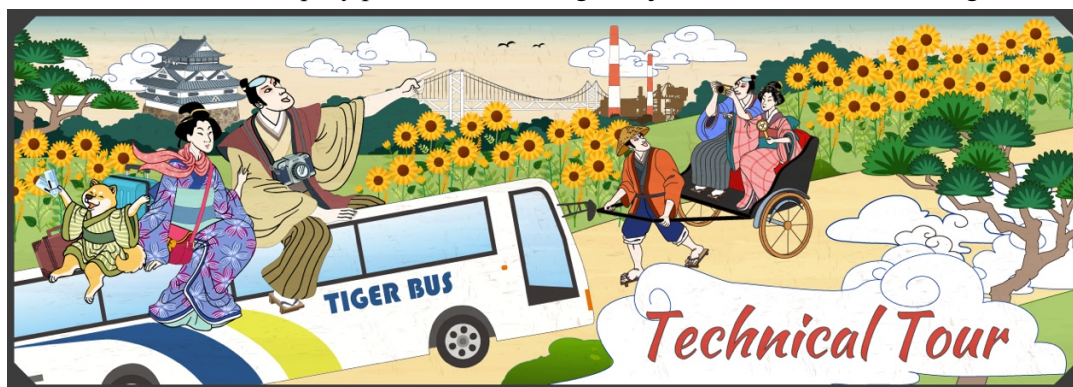
Conference Banquet at Takami Shrine, July 15 (Tue), 2025

- Bus departure point: Courtyard at International Conference Center

Ice cold beer and Wine Festival at Courtyard, July 16 (Wed), 2025

Farewell Reception at Sea Lounge, July 17 (Thu), 2025

July 13 (Sun) 1:00PM-2:40PM

Room A   SCAI-SS3-1

Session Co-Chairs: Jaouhar Fattahi (Laval University), Mohamed Mejri (Laval University) and Mariam Wajdi Ibrahim (German Jordanian University)

Incident Report Generation System for Elderly Care Facility Staffs

Rie Sato, Kenta Ide, Tomoyuki Okamura, Ken-Ichi Tabei, Hisashi Hayashi and Hideki Murakoshi

Nighttime Weather Estimation Using U-Net Architecture with Mobile Ground-Based Devices

Shota Kusabiraki, Yuta Shimmura, Shin Suzuki, Nobuhiro Inuzuka, Atsuko Mutoh, Koichi Moriyama, Kosuke Shima and Kazunori Iwata

Genetic Optimization of Item Multiplicity and Location Assignments in Automated Warehouses

Kosei Uemura, Kazuya Okamoto, Hiroki Sakaji and Itsuki Noda

Analyzing Relationship Between Head-on Collision and Road Curvature

Keisuke Ando, Takeshi Uchitane, Naoto Mukai, Kazunori Iwata and Nobuhiro Ito

Room B   DSTM-SS-3 and SBIT 1

Session Chair: Morihiko Ikemizu (Advanced Institute of Industrial Technology)

Toward a Quantitative Validation of Entrepreneurial Char-acteristics and Ecosystem in Japan: An Exploratory Factor Analysis

Katsuki Yasuoka, Takaaki Hosoda, Kiyomi Miyoshi, Tokuro Matsuo and Qiang Ma

Interorganizational Relationships and Structural Changes in Traditional Craft Production Areas: A Case Study of Oshima-Tsumugi in Kagoshima, Japan

Takeshi Baba

Correlation between learning motivation and realization among working students, and the factors - Examination using a hypothesis verification approach -

Morihiko Ikemizu, Takaaki Hosoda, Yuya Yokoyama and Tokuro Matsuo

Comparative Benchmarking of CPU-Only x86 64 and ARM64 Architectures for High-Performance Computing

Wei-Yu Chen, Chau-Yi Chou, Yu-Bin Fang, Yi-Lun Pan and Vincent Shin-Mu Tseng

Room C   DSIR-SS2-1 + ESKM 1

Session Chair: Tetsuya Oishi (Kyushu Institute of Technology)

Exploring Differences in Time Spent Tracking: IntelliBoard vs Edwiser Reports in Moodle

Yuji Kobayashi

Research on First year students' global competence development and its impact on study abroad: An Analysis Through the intercultural collaborative learning course "MCW"

Noboru Miyoshi and Miki Cutting

An Analysis of Learning Behaviors Using a System for Visualizing and Sharing Learning Assessments

Nobuhiko Kondo, Toshiharu Hatanaka and Takeshi Matsuda

Temporal Graph Convolutional Networks for Environmental Anomaly Detection

Wei-Yu Chen, Ta-Wei Wang, Peggy Joy Lu, Hao-Tsung Yang and Vincent Shin-Mu Tseng

Room D   CDEF-SS2-1

Session Chair: Hiroki Sakaji (Hokkaido University)

Estimation of surprising businesses in companies using LLM

Yoshimasa Kobayashi, Hiroyuki Sakai and Kaito Takano

Improving Explainability in Stock Return Prediction Using Stock Forum Texts with Independent Component Analysis

Shuta Nakajima, Toshiaki Watanabe, Mamoru Komachi and Atsushi Keyaki

Forecasting Japanese Recessions Using Machine Learning and Text Data

Mototsugu Shintani and Yusuke Oh

Do Audit Firms Manage the Content of Key Audit Matters in Japan? Evidence from Lexical Diversity and Author Identification

Nobushige Doi, Yusuke Nobuta and Takeshi Mizuno

July 13 (Sun) 3:00PM-5:05PM

Room A   SCAI-SS3-2

Session Co-Chairs: Jaouhar Fattahi (Laval University), Mohamed Mejri (Laval University) and Mariam Wajdi Ibrahim (German Jordanian University)

Analysis of Agent Actions on a Rescue Simulation Task Assignment Optimization Problem

Koki Yamada, Takeshi Uchitane, Kazunori Iwata and Nobuhiro Ito

Improving Evacuation Efficiency through Dynamic Matching of Evacuees and Rescuers

Kosuke Hayashi, Fumio Tanabe, Satoshi Yamazaki, Rie Sato, Hideki Murakoshi and Hisashi Hayashi

Design and Analysis of Experiments for the Relationship between Components of Rescue Strategies and Map Characteristics

Shuntaro Fujii, Kouta Katou, Itsuki Matsunaga, Keisuke Ando, Takeshi Uchitane, Naoto Mukai, Kazunori Iwata and Nobuhiro Ito

Proposal of a Latent Information Visualization System Based on Agent Improvement Flow Analysis

Ryuki Yamamoto, Mihono Maruoka, Keisuke Ando, Takesh Uchitane, Naoto Mukai, Kazunori Iwata and Nobuhiro Ito

Room B   SCAI-SS3-3

Session Co-Chairs: Jaouhar Fattahi (Laval University), Mohamed Mejri (Laval University) and Mariam Wajdi Ibrahim (German Jordanian University)

Modeling evacuation decision-making and discussion using generative AI

Fumio Tanabe, Kosuke Hayashi, Satoshi Yamazaki, Rie Sato, Hideki Murakoshi and Hisashi Hayashi

Three-Stage Relation Identification in Argument Trees with BERT and GNNs

Tomokazu Hasegawa and Kazutaka Shimada

Macroscopic Observations on the COVID-19 Propagation in Europe During the First Year of the Pandemic

Goizalde Badiola and Manuel Graña

Room C　DSTM-SS2

Session Chair: Takaaki Hosoda (Advanced Institute of Industrial Technology)

A Study on a New Framework for the Influence of Time Constraints on Decision Making

Hiroyuki Furuya, Takaaki Hosoda and Tokuro Matsuo

Exploring Pre-Senior Decision-Making Styles Using the Qualitative Synthesis Method

Eriko Musashi, Takaaki Hosoda and Daisuke Ikeda

A study on organizational decision-making from the perspective of uncertainty and ambiguity – A Multi-Agent Simulation model

Ryosuke Ando

Validating the Factor Structure of Acceptance in Practical Decision-Making: A Confirmatory Factor Analysis Approach

Takaaki Hosoda and Tokuro Matsuo

Room D　BMOT-SS2-1

Session Chair: Shimpei Matsumoto (Hiroshima Inst. of Tech.)

Predicting success factors of regional revitalization crowdfunding projects using logistic regression analysis

Kazuki Munehisa and Shimpei Matsumoto

Experimental evaluation based on a technology acceptance model for the use of congestion mitigation applications

Negai Nakamoto, Hiroyoshi Matsumoto and Shimpei Matsumoto

The Influence of Visual Elements and Color Sensitivity on Product Image Selection

Nozomi Fujiwara, Kouki Saeki and Shimpei Matsumoto

Quantifying Momentum Effects via Risk-Adjusted Portfolio Optimization with the Hurst Exponent

Tsubasa Ando and Takashi Hasuike

A Regional Digital Transformation System for Enhancing Local Vegetable Supply in School Lunches

Tomoko Kashima, Takashi Hasuike and Shimpei Matsumoto

An Extension of the Levenshtein Distance for Learning Process Analysis in Constructive Learning and an Evaluation of Its Effectiveness

Natsumi Tanabe, Karin Yagami and Shimpei Matsumoto

July 13 (Sun) 4:30PM-5:30PM

Welcome Cocktail at Sea Lounge

July 14 (Mon) 9:30AM-11:35PM

Room A SCAI 1

Session Chair: Takafumi Nakanishi (Tokyo University of Technology)

Extraction of Human Relationship Terms Associated with Characters and Speakers from Novel Lines

Tomoaki Yasuda and Kazuaki Ando

Research on a Rice Growth Stages Classification Method for an Automatic Weed Control Robot in Paddy Fields

Shunya Abe, Tetsuya Nakamura, Taiichiro Ookawa and Hironori Nakajo

Experiments on Speaker Independent Speech Emotion Recognition

Francisco Portal, Javier De Lope and Manuel Graña

Customer Analysis and Text Generation: LLM-Generated Marketing Presence for Small Retail Stores

Shiori Nakamura, Masato Kikuchi and Tadachika Ozono

Large Language Models as Genetic Algorithm Optimizers

Masaki Koga, Jinglue Xu and Hitoshi Iba

Room C BMOT-SS2-2 and BMOT 1

Session Chair: Shimpei Matsumoto (Hiroshima Inst. of Tech.)

Examining the Connection Between the Color Scheme of Event Announcement Images and View Counts on Social Media Through Machine Learning Models

Kayu Morishige, Daichi Inoue and Shimpei Matsumoto

AI RBSOs' Selection of Innovation Modes under Institutional Logic Tendency

Wei Liu, Yuntao Li and Shuxia Wang

Proposal of an SEIR Model Considering Inter-population transfers and vaccine availability in large populations.

Hiroyoshi Matsumoto, Yusuke Yamauchi and Shimpei Matsumoto

Digital Transformation in Japan's Accommodation Sector -A Case Study of TAP Hospitality Lab Okinawa

Masashi Ishitani

Awareness Changes in Participants in Online Symposiums - Observations from Pre- and Post-Questionnaire Survey Results

Yuya Yokoyama, Tokuro Matsuo and Hidekazu Iwamoto

Room D CDEF-SS2-2

Session Chair: Hiroki Sakaji (Hokkaido University)

Tweets on Childbirth in Japan: Sentiment and Influence

Toshitaka Sekine and Tetsuro Wada

How Much Do Qualitative Changes in R&D Activities Disclosure Text Explain Corporate R&D Investment? An Empirical Analysis of the Constituents of TOPIX 500

Nobushige Doi

Collecting Causal Relation Article Pairs on Stock Price Fluctuation by LLMs

Yurina Kosai, Shunsuke Nishida, Rikuto Tsuchida, Man-Yun Liu and Takehito Utsuro

Analysis of the Keiki Watchers Survey using Independent Component Analysis and Linear Discriminant Analysis

Yuika Shiina, Masahiro Kato and Ryo Inokuchi

Perspectives on Michelin Green Star Restaurants: Inspector and Customer Review Analysis

Yu-Hsiang Hsiao, Mu-Chen Chen and Pei-Rou Yang

July 14 (Mon) 11:35AM-1:00PM

Lunch on your own (Beverage and snacks are available at Foyer)

July 14 (Mon) 1:00PM-1:30PM

Opening Ceremony at Room A

July 14 (Mon) 1:30PM-2:20PM

Keynote Address 1 at Room A

Session Chair: Ford Lumban Gaol, Ph.D. (Bina Nusantara University / IEEE CS Chair Indonesia / IIAI ASEAN President)

Towards Building a Medical Foundation Model Using Self-Supervised Learning Techniques

Kwei-Jay Lin, Ph.D. (Chang-Gung University and University of California)

Abstract

AI has changed how we live and work in the past decades. AI is also coming to the medical field even with its extremely high standard of quality and accountability. Among factors that make AI so successful now, including big hardware, large model, and big data, AI research in medicine has the most challenge on finding a large volume of high-quality medical data. The problem is that human cost required to label or annotate high quality medical data from raw data is much more expensive due to the scarcity and time demand on domain experts in each medical field. In this talk, we share our approaches and experiences on using powerful AI technologies such as self-supervised learning, fine tuning, and multi-modality learning to meet the challenge.

Bio

Kwei-Jay Lin is a Chair Professor in the Department of Artificial Intelligence and Director of the AI Research Center at the Chang Gung University (CGU), Taoyuan, Taiwan. He was the Founding Dean, CGU College of Intelligent Computing during 2022-2024. He is an IEEE Fellow and a Professor Emeritus in the EECS Department at the University of California, Irvine. He is a Visiting Professor at the National Taiwan University and National Tsing Hua University, Zhejiang University, and Nagoya Institute of Technology in Japan.

Prof. Lin received the MS and PhD degrees in Computer Science from the University of Maryland, College Park, USA. He is Editor-In-Chief of the Springer Journal on Service-Oriented Computing and Applications (SOCA). He was an Associate Editor of IEEE Transactions on Parallel and Distributed Systems, and an Associate Editor of IEEE Transactions on Computers. He has served on many international conferences as conference and program chairs. His

research interest includes machine learning theory, computer vision, medical AI, IoT middleware, service-oriented computing, real-time systems, and distributed computing.

July 14 (Mon) 2:20PM-3:10PM

Keynote Address 2 at Room A
Session Chair: Fahim Khan (Toyo University)

Greenhouse Detection and Energy Demand Modeling Using Aerial Imagery and AI
Yung-Cheol Byun, Ph.D. (Jeju National University)

Abstract

Achieving 100% renewable energy (RE100) critically depends on addressing the issue of electricity curtailment. Instead of halting renewable energy generation during periods of surplus electricity, the excess power should be utilized to produce green hydrogen, which can subsequently serve as an energy source for agricultural facilities, such as greenhouses, during electricity shortages.

This study proposes a method for accurately detecting greenhouses and modeling their energy demand using aerial imagery combined with Vision Transformers (ViT). While previous research primarily focused on general object detection and land classification, this study aims for precise detection of small-scale energy-consuming structures, like greenhouses, to enhance the accuracy of energy demand predictions. To achieve this, the study compares the performance of Open-World Localization Vision Transformer (OWL-ViT) and YOLO models, subsequently employing the Segment Anything Model (SAM) for detailed area segmentation. This segmentation accurately identifies the area of energy-consuming structures, and together with regional climate data, facilitates predictions of green hydrogen consumption.

Ultimately, this research implements a precise energy demand prediction model based on aerial and satellite imagery, enabling effective estimation of hydrogen energy demand specifically for greenhouse operations in agriculture. By significantly improving detection accuracy over existing methods, the proposed approach provides practical strategies for transitioning to renewable energy, allowing the produced green hydrogen to be effectively utilized across various sectors, including agriculture.

Bio

Professor Yung-Cheol Byun is a full professor in the Department of Computer Engineering at Jeju National University. His main research interests include Artificial Intelligence, Machine Learning, Pattern Recognition, Blockchain and Deep Learning-based Applications, Big Data and Knowledge Discovery, Time Series Data Analysis and Prediction, Intelligent Agents, Medical Applications, Recommendation Systems, AI-based Distributed Energy, Green Hydrogen, and AI. He currently leads the Machine Learning Laboratory within the department and has published over 200 SCIE-indexed journal papers.

From 2012 to 2014, he conducted research as a visiting professor at the University of Florida. He currently serves as the Director of the Information Science Technology Institute, the Head of the Jeju Industry-Academia Convergence District Project, the Director of the Venture Startup Academy Center, and the Head of the RIS Office for High-Intelligent

Service. He has also served as the Director of the Advanced Science and Technology Research Center and as an outside director of Jeju Bank. He is actively involved in various academic societies including the Korean Institute of Information Scientists and Engineers (KIISE) and the Korea Information Technology Society (KIT).

Beyond his research, Professor Byun has organized international conferences such as CNSI (Computer, Network, Systems, and Industrial Engineering) and ICESI (Electric Vehicle, Smart Grid, and Information Technology). Since 2017, he has successfully hosted a Machine Learning Camp in Jeju, selecting 20 researchers from around the world annually. He also leads global programs such as the AI Camp for Asian university students. In addition, he serves as a general chair, program chair, and session chair at various international conferences and workshops.

Professor Byun was born in Jeju, Korea. He received his MS (2001) and PhD (1995) from Yonsei University and his BS from Jeju National University in 1993. Prior to joining Jeju National University, he worked as a special lecturer at Samsung Electronics in 2000 and 2001, and as a senior researcher at the Electronics and Telecommunications Research Institute (ETRI) from 2001 to 2003. He joined Jeju National University as an assistant professor in 2003 and has been serving there since.

July 14 (Mon) 3:25PM-5:30PM

Room C   DSIR-SS2-2
Session Chair: Yuji Kobayashi (Kyushu Institute of Technology)
Development and Operation of an All-in-One IR System
Tetsuya Oishi
Evaluation of an Asynchronous Lecture Model based on Motivation Scales
Shin'Nosuke Yamaguchi, Yoshimasa Ohnishi and Kazunori Nishino
Designing KAYOWAI Robots for Learning persistence Based on the ARCS Model
Nana Kodama, Naka Gotoda and Takayoshi Kitamura
Developing a Tutorial for SCOT Student Training with Automated Feedback Support
Kenshin Murakami, Naka Gotoda and Yuji Kobayashi

Room D   CDEF-SS2-3
Session Chair: Masanori Hirano (Preferred Networks, Inc.)
Evaluating Reranking of Accounting Knowledge Web Pages by LLMs towards RAG based QA
Shohei Iida, Kuta Takahashi, Takashi Mitadera, Rikuto Tsuchida, Ryo Hasegawa, Takehito Utsuro, Youchao Lin and Rie Shishido
The Construction of Instruction-tuned LLMs for Finance without Instruction Data Using Continual Pretraining and Model Merging
Masanori Hirano and Kentaro Imajo
Utilizing Text Fragments of Stock Price Fluctuation Factors in Charts for Financial News Article Generation by LLMs
Yurina Kosai, Shunsuke Nishida and Takehito Utsuro
pfmt-bench-fin-ja: Preferred Multi-turn Benchmark for Finance in Japanese
Masanori Hirano and Kentaro Imajo

July 14 (Mon) 6:00PM-8:00PM

Welcome Reception and Poster Session at Room A

Session Co-Chairs: Daisuke Ikeda (Kyushu U.), Yuichi Ono (U. of Tsukuba), Naruhiko Shiratori (Tokyo City U.), Takafumi Nakanishi (Tokyo U. of Technology), Shimpei Matsumoto (Hiroshima Inst. of Tech.), Hidekazu Iwamoto (Josai International U.), Yukihiro Shintani (Chiba Inst. of Tech.), Taishi Nemoto (U. of Kochi) and Takaaki Hosoda (Advanced Inst. of Industrial Tech.) and Masanori Hirano (Preferred Networks, Inc.)

ESKM Posters

Evaluating and Enhancing RAG Systems through Test and Source Analysis

Kotsuwan Ornus, Zelan Shi and Kaunori Matsumoto

Downscaling of Crime Counts from City Level into Neighborhood Level Based on Machine Learning

Chen Zhang, Mamoru Amemiya, Daisuke Murakami and Tomoya Ohyama

Multi-Label Classification for High School Mathematics Problems Using Retrieval-Augmented Generation

Shun Tanaka and Keiichi Tamura

Detection of Injury Patterns in Japanese Thoroughbred Racehorses

Haruma Abe and Atsuko Yamaguchi

Toward Extracting Generalized Cloud Resource Control Vocabulary from Existing Cloud Control Codes

Haruhiro Takahashi, Takaaki Kawai and Naoki Fukuta

Predicting Phagocytotic Activity of Leukocytes in Gram Stained Smears Images

Kouya Kagemoto, Ryunosuke Nakajo and Kouichi Hirata

Support for Recalling Past Events Using X Posts

Yuta Tsutsumi and Harumi Murakami

Toward a Better Wording Recommendation System for Social Media Posts based on the Ethical Ontology

Hiroki Kawabata and Naoki Fukuta

A Study on the Key Factors Influencing Consumers' Adoption of NFT Application Services from the Perspective of PPM Framework

Chih-Jou Chen, Ju-Chuan Wu and Cheng-You Tsai

A Feasibility Study on the Automatic Classification of Case Reports Using Large Language Models and Phenotyping Flowcharts

Atsuko Yamaguchi, Yuka Tateisi and Toyofumi Fujiwara

A Knowledge Graph Approach for Analyzing Player Social Media Reviews

Ziyu Zhao and Junichi Fukumoto

LTLE Posters

Designing an augmented reality educational board game integrated with multi-dimensional scaffolding and instant diagnose mechanism in culinary training

Cheng-Tai Li, Yu-Ju Huang, Pei-Cen Wang, Fan-Yun Xiao and Huei-Tse Hou

Experimental Development of Learning Support System for Toyosaka-mai Using Consumer-Grade Motion Capture

Hiroto Yamakawa

Design of Instructional Activities Integrating Educational Board Game Learning and Formative Evaluation of Multiplayer Online Card Games

Yu-Yun Su, Yu-Chi Chen and Huei-Tse Hou

Dialogue System for Language Learning using Gaze Tracking and Facial Expression Recognition

Yosuke Seki

Development and Evaluation of a Digital Concept Mapping System for Nursing Process Learning Support － An Assessment Based on Nursing Students' User Experience －

Sakiko Sumai, Norio Ishii, Yuri Suzuki and Hiroaki Sawano

Exploring the Effects of a Scaffolded Programming Learning Environment Integrated with ChatGPT on Students' Learning Performance and Self-Efficacy

Li-Heng Hung and Chia-Jung Chang

Investigating Critical Thinking Patterns in a VR Educational Game: A Behavioral Sequential Analysis

Tsung-Yen Chuang, Yu-Hsuan Lu and Wei-Fan Chen

Evaluating the Impact of Different Generative Artificial Intelligence Reflection Scaffolding Intervention Sequences on Digital Content Creation

Yu-Chi Chen

Design of a Collaborative Science Educational Game Using Shared Large Screen and Mobile Device Control Mechanisms

Yu-Jen Lin, Huei-Tse Hou and Yu-Chi Chen

Design of a Learning Support System for Understanding Conceptual Knowledge of Web Server Construction

Yuto Ohira, Kenichi Fukamachi and Hiroshi Komatsugawa

Considering realtime feedback for supporting teacher using eye gaze data in virtual reality

Taichi Akana, Kousuke Mouri, Masaru Okamoto, Yukihiro Matsubara and Lin Shengkai

Enhancing Educational Outcomes by Using Machine Learning to Classify and Organize Classrooms

Phan Nhu Quynh

A Preliminary Evaluation of Combining Game-Based Exploratory Picture Books with Generative AI-Led Learning Activities for Kebbi Robot

Han-Shu Hsieh and Huei-Tse Hou

The Prediction Modeling System for Monitoring Elementary Students' Mathematics Progress in Online Curriculum-Based Measurement

Mengping Tsuei

Exploring Collaborative Argumentation Through a Local-Issue-Based Board Game: A Case Study with High School Student Groups

Kuo-Yang Chiu, Mingfong Jan and Tieh-Huai Chang

A Game Design for Market Research and Planning Skills Development in Catering Industry Integrating Multi-dimensional Generative AI Characters Interaction Mechanisms

Yu-Cheng Lin and Huei-Tse Hou

Fostering AI Understanding and Perception through SDG-Oriented Hands-On Learning for Non-CS Students

Hercy N. H. Cheng and Charles C. Y. Yeh

DSIR Posters

Assessing Social Applicability of Student Learning Out-comes Considering Faculty and Career Path Differences

Shinji Hosokawa and Akihiro Naganawa

A Study of the Relationship between Learning in a Professional Seminar and its Workplace Application for Graduates of a Social Sciences Laboratory

Tatsuya Tsumagari and Yoko Nakazato

Research on Automatic Generation of Data Access and Visualizations Using LLM Agents

Sora Watanabe, Haruki Ueno and Hiroshi Komatsugawa

Designing Behavioral Indicators for Assessing Learning Outcomes Based on Diploma Policy

Sayaka Matsumoto, Kunihiko Takamatsu, Shotaro Imai, Tsunenori Inakura and Masao Mori

Development of AI teaching materials for elementary school students using STEAM education

Kaito Moriyama and Takaaki Arahira

Mapping the Landscape of CSR Research through Citation Network Analysis

Kumi Ushio

Obtaining Factors of What Was Acquired through Questionnaire Aimed at Graduates of an Educational Institute

Yuya Yokoyama, Takaaki Hosoda, Morihiko Ikemizu and Tokuro Matsuo

SCAI Posters

Acute Myocardial Infarction Detection Based on Single-Lead Electrocardiogram Using Temporal Image Transformation and Deep Learning

Bo-Yi Wu, Jui-Chih Chang, Ya-Ting C. Yang and Jeen-Shing Wang

Investigation of Brightness and Traffic Volume as Factors Affecting Traffic Accidents Using Traffic Accident Risk Analysis

Ryo Hatano, Yu Sasaki, Erina Shirai, Miwa Hoshino, Keisuke Ando, Takeshi Uchitane, Naoto Mukai, Kazunori Iwata and Nobuhiro Ito

Personalized Music Impression Estimation Based on Dynamic User Model

Hui Zhou and Takahiro Hayashi

Deep Learning-Based Parameter Identification for Lithium-Ion Battery Equivalent Circuit Models

Chun-Cheng Huang, Chun-Hsien Yu, Yi-Hua Liu, Zong-Zhen Yang, Yu-Fang Hsueh and Shi-Quan Huang

Component Configuration Optimization for System Reliability via GWO and Monte Carlo Simulation

Cheng-Ta Yeh and Po-Wei Wu

Speaker Recognition Using VGG and MobileNet for Forensic Applications

Jaouhar Fattahi, Bessel Belhassan Rahali, Mohamed Mejri, Ridha Ghayoula and Mohamed Glaoui

A Tabular Data Approach to Skeleton-Based Human Action Recognition

Shogo Oyabu and Keiichi Yamada

Mining Online Reviews with Fake Review Detection to Improve Logistics Service Quality

Mu-Chen Chen, Hsien-Hua Wu and Yu-Hsiang Hsiao

Methods of measuring audience response applicable to traditional performing arts

Masahiko Narita

BMOT Posters

A Study on the Key Factors for the Success in Evaluating Fast Fashion Enterprises' Brand Value Based on ESG

Chia-Chi Hsu and Teng-Sheng Su

Integrating Hybrid m-DANP and Service System Simulation for Short-Chain Logistics: A Case Study on Drone Delivery Selection

Teng-Sheng Su, Ting-Yin Chen, Chen-Hsiang Ko, Yi-Xuan Zhao and Kuan-Chang Huang

The Influence of Self-Focused Language on Crowdfunding Success Through the Lens of Strategic Self-Presentation

Shu-Lu Hsu, Lei Zhou and Hersen Doong

A Case Study on Strategic Digital Transformation in Tradi-tional Manufacturing

Tai-Yu Lin, Sheng-Pin Wu, Chien-Chih Wang, Kun-Zhong Lin, Yu-Hsuan Cheng, Wei-Yu Shen, Chiu-Han Chuang and Meng-Hsien Chen

SBIT Posters

Multi-Region Cloud Architecture for Hybrid Computing

Hui-Shan Chen and Yi-Lun Pan

Fault Diagnosis for Three-Phase Voltage Source Inverters Using Current Waveform Analysis and Machine Learning

Chun-Hsien Yu, Chun-Cheng Huang, Zong-Zhen Yang, Shi-Xin Xu and Yi-Hua Liu

Development of a Framework for Promoting the Use of Multiple Assignment Exercises in Basic Nursing Education

Hanae Okamoto, Kiyoko Tokunaga, Katsuaki Suzuki and Hideto Ogasawara

Aesthetic Quality Assessment of Images Using Text Tags with CLIP

Atsushi Sugiura and Yuji Yamauchi

Enhancing Anomaly Detection Accuracy with Conditional CutPaste

Haruki Honda and Yuji Yamauchi

Methodology of DAO-ization by Media Platforms Tailored to Organizational Structures

Toru Takagi and Yukihiro Shintani

IDDC Poster

Research on Generative AI Dialogue Systems in Mixed Reality

Hina Yoshida, Osamu Hsegawa, Mio Kikuhara, Haruki Ueno and Hiroshi Komatsugawa

DSTM Poster

Predicting Goodreads Choice Awards Winner based on Social Proof Theory

Chiau Shu Pan and Yung Ming Li

CDEF Posters

A Socio-Economic Analysis of Car Retirement Program: Machine Learning-Based Approach for Equitable Policy

Annie Wu

Applying LLMs to Japanese Table Question Answering of Securities Reports

Long Si, Yin Zhang, Xiaotian Wang and Takehito Utsuro

Prediction of REITs performance using machine learning methods with alternative data

Makoto Nakakita, Taiga Nishimura and Takahiro Hoshino

July 15 (Tue) 9:30AM-11:35AM

Room A   SCAI 2

Session Chair: Takafumi Nakanishi (Tokyo University of Technology)

WELPSO: An Ensemble Learning Model for Multi-Party Conversation Disentanglement using Particle Swarm Optimization

Cheng-Zen Yang, Syue-Rong Lin, Chi-Lun Chiang and Liang-Chen Lu

Multiobjective Optimization for Feedback-based, Multi-hop Molecular Communication

Junichi Suzuki, Yi Cheng Ren and Tadashi Nakano

Multi-Object Tracking System with Dual Transformer and OC-SORT Model

Hao-Chun Pai and Yi-Leh Wu

Automating Query Generation for Support Inquiries via LLM-Based Main Topic Sentence Extraction

Kaito Hoshi, Tomoya Tsukahara, Hironori Utsumi and Mizuho Sawada

Room C   SBIT 2

Session Chair: Yukihiro Shintani (Chiba Institute of Technology)

Improving Spectrum-Based Fault Localization through Targeted Augmentation of Failing Test Cases

Chu-Ti Lin, Hau-Xuan Luo, Yi-Te Lu, Ting-Wei Tsai and Shao-Kuei Tang

Evacuation Guidance System Using SSID-Based Communication with UAVs

Shohei Taga, Munehiro Takimoto, Tomofumi Matsuzawa and Yasushi Kambayashi

Implementation of AI-Based and Day-Based Access Control Function in DACS-Based PBNM Scheme

Kazuya Odagiri, Shogo Shimizu and Naohiro Ishii

The Impact of Surgery Duration Estimation on Room Openings: A Mixed-Integer Programming Model for Operating Room Scheduling

Xinyun Bai, Mari Ito, Sinan Chen, Yusuke Nakata, Masaaki Suzuki, Tokito Koga and Aurelius Aaron

Estimating Consumption Characteristics of Tourist Areas through Credit Card Data

Hiroshi Tsuda

Room D   CDEF-SS1

Session Co-Chairs: Yasutomo Kimura (Otaru University of Commerce), Kazuma Kadowaki (The Japan Research Institute, Limited) and Hokuto Ototake (Fukuoka University)

Empirical Findings from Table-related Shared Tasks in Japanese Annual Securities Reports

Yasutomo Kimura, Eisaku Sato, Kazuma Kadowaki and Hokuto Ototake

A Hybrid Search for Complex Table Question Answering in Securities Report

Daiki Shirafuji, Koji Tanaka and Tatsuhiko Saito

Enhancing Large Vision-Language Models with Layout Modality for Table Question Answering on Japanese Annual Securities Reports

Hayato Aida, Kosuke Takahashi and Takahiro Omi

A Table Search Method for Securities Reports Based on Binary Classification Using Re-rank Filters

Yuki Fujita, Ryota Mizushima and Hokuto Ototake

Extracting and Structuring J-REIT Property Information from Tabular and Textual Sources via Few-Shot Prompting in Large Language Models

Nobushige Doi and Mayuri Tanaka

Room E   ESKM-SS2-1

Session Co-Chairs: Kouichi Hirata (Kyushu Institute of Technology) and Atsuko Yamaguchi (Tokyo City University)

Enhancing Generative AI Output on Rare Diseases: Development of a Database for Retrieval-Augmented Generation System

Teppei Okazaki, Toyofumi Fujiwara and Atsuko Yamaguchi

A GNN model for Fraud Detection Focusing on the Distribution of Neighboring Nodes

Minghao Wu and Daisuke Ikeda

Detecting Bacteria in Gram Stained Smears Images by HIC-YOLO and Its Variants

Hiroto Tabakotani, Ukyo Kashino and Kouichi Hirata

Classifying Rectangle Regions of Bacteria in Gram Stained Smears Images

Hiromu Kuroishi and Kouichi Hirata

Mutual Learning Meets Double Descent: A Study of the Generalization Process

Fumika Komori, Keiichi Nakanishi and Terumasa Tokunaga

Room F   LTLE-SS2 and LTLE 1

Session Co-Chairs: Michiyo Oda (Reitaku University) and Yuichi Ono (University of Tsukuba)

Perceptions and Strategies in Using Machine Translation for Japanese Learners of English

Haruno Koshida and Yuichi Ono

Enhancing Mandarin Listening through Game-Based Learning and Personalized Video Annotations

Ying-Jie Hong, Ming-Chaun Li, Chih-Ming Chen and Zi-Han Yu

Enhancing Chemical Lab Safety Education through a Mixed Reality Chemistry Experiment Platform

Yu-Ya Hung, Ming-Chaun Li, Chih-Ming Chen and Chia-Cheng Tu

Facilitating Mandarin Pronunciation Accuracy through a Gamified Tone Diagnosis and Feedback System

Yun-Hui Liu, Ming-Chaun Li, Chih-Ming Chen and Jia-Jia Xin

Learners' Gaming Experiences in the Issue-Based Board Game <Mosa Tayal>

Geng-De Hong, Ju-Ling Shih, Wan-Ting Kuo and Yu-Hao Lu

July 15 (Tue) 11:35AM-1:00PM

Lunch on your own (Beverage and snacks are available at Foyer)

July 15 (Tue) 1:00PM-2:40PM

Room A   LTLE 2

Session Chair: Yuichi Ono (University of Tsukuba)

Preliminary Practices for Beginner's Programming Course Utilizing Generative AI and Online Education

Miyuki Murata, Naoko Kato and Tetsuro Kakeshita

Evaluating Instructor Role in a Personal Software Pro-cess Improvement Course Based on the Process Data

Shigeru Kusakabe, Masanobu Umeda, Keiichi Katamine and Shunsuke Araki

AR Training for Automotive Repair Paint Inspection: Development and Evaluation

Yuka Takai and Shigeru Ikemoto

Principle-Driven Micro-Script Generation for Informal Collaborative Learning on Discussion Boards

Hideki Kondo

Room C   DSIR-SS1&SS4

Session Co-Chairs: Yoshikazu Asada (Jichi Medical University), Eriko Tanaka (Nihon University) and Takaaki Ohkawauchi (Nihon University)

Developing a Moodle-based e-portfolio for postgraduate medical education in Japan – A trial based on a nationwide clinical training system

Yoshikazu Asada

Investigation of the Current State of Data Science Education in High Schools and Higher Education Institutions

Eriko Tanaka and Takaaki Ohkawauchi

Japanese Tokenization using Simple Associative Arrays

Michiko Yasukawa and Koichi Yamazaki

Practice and Evaluation of Data Science Education for First-Year Students in Foreign Language Faculties - A Case Study of an On-Demand Course Using BI Tools -

Shuntaro Iseri

Room D   BMOT-SS1 and BMOT 2

Session Chair: Yokoyama Yuya (Advanced Institute of Industrial Technology)

Development of a Sequential Path Determination Method Integrating Flood Forecasting and Traffic Congestion Prediction

Kota Funakoshi, Jundai Koketsu, Tatsunori Hiramoto, Yasuo Nihei and Aya Ishigaki

Design of Charging Spot Placement Patterns of Wireless Power Transfer Systems for Automated Guided Vehicles in Logistics Warehouses

Mana Kubota, Keiichi Ida, Aya Ishigaki, Kota Mori, Shoei Miyata and Nobukazu Hoshi

Time-Efficient Multi-Agent Simulation Reflecting Actual Resident Population

Tomoichi Ebata, Ryo Ariyoshi and Shinji Tanaka

Room E   ESKM-SS2-2

Session Co-Chairs: Kouichi Hirata (Kyushu Institute of Technology) and Atsuko Yamaguchi (Tokyo City University)

The Impact of Purchase Path Satisfaction on Purchasing Decisions Using Multi-Agent System

Keitaro Takaoki, Aya Saito and Atsuko Yamaguchi

Detecting Bacteria in Gram Stained Smears Images by YOLO and SOD-YOLO

Hikaru Kobata, Ukyo Kashino and Kouichi Hirata

Fast Approximate Nearest Neighbor Search via Double Filtering of Quantized Projections

Naoya Higuchi, Yasunobu Imamura, Takeshi Shinohara, Kouichi Hirata and Tetsuji Kuboyama

Classifying Entire Images of Samples and Bacteria in Gram Stained Smears Images

Tadashi Morikawa and Kouichi Hirata

July 15 (Tue) 3:00PM-4:15PM

Room A   SCAI 3

Session Chair: Takafumi Nakanishi (Tokyo University of Technology)

Wine Brand Identification from Electrochemical Measurements Using Neural Networks

Yugi Honma, Suguru Ueda, Nobutomo Morita, Kenshin Takemura, Wataru Iwasaki and Shinya Ohmagari

Pre-training for Transfer Reinforcement Learning by ACO-based Network Structural Optimization

Kohtaro Uchida, Keiki Takadama and Hitoshi Iba

Efficient Algorithms for Numeric Data Compression

Yen-Yu Chen and Chang-Biau Yang

Room C   IDDC 1

Session Chair: Taishi Nemoto (University of Kochi)

The Newly Established Subject "Theory and Methods for the Utilization of ICT in Education" in the Japanese Teacher Training Curriculum: An Examination of the Ef-fects of Intensive and Remote Classes

Mitsuhiro Watanabe and Tatsuya Horita

Proposal for a PBL-type learning model using 3D Gaussian splatting

Kazuya Murata and Taishi Nemoto

Proposal for a Novel Recipe Generation Approach Using Inverse TF-IDF and Generative AI

Mutsumi Kodama and Taishi Nemoto

Room D   ESKM-SS3 + ESKM 2

Session Chair: Hiroaki Furukawa (The University of Kitakyushu)

Corpus Construction for Automatic Meal Planning

Michiko Yasukawa and Falk Scholer

Improving Historical Understanding through Metaverse-Based Digital Curation: A Case Study of WWII Taiwanese Civilian Internment

Hsin-Pei Huang, Ming-Chaun Li, Chih-Ming Chen and Jung-Hsiu Weng

Investigating the Impact of a Gamified Mixed Reality Digital Curation System on Learning Performance and Motivation

Tsung-Lin Shih, Ming-Chaun Li, Chih-Ming Chen and Hsin-Yu Lin

Room E   ESKM-SS2-3 + ESKM 3
Session Co-Chairs: Kouichi Hirata (Kyushu Institute of Technology) and Atsuko Yamaguchi (Tokyo City University)

Improved Prediction of Yeast-Like Fungi in Gram Srtained Smears Images

Tubasa Tanaka and Kouichi Hirata

Improved Prediction of Geckler Classification in Gram Stained Smears Images for Sputum

Kei Goto, Masaki Kono and Kouichi Hirata

Digital technology applications for discovery of contextual links among records - Developments, challenges, and prospects of information sources from Chinese medieval history

Yichen Wu

July 15 (Tue) 4:30PM-5:00PM

Bus Departure for the banquet venue
Meeting point: Courtyard at International Conference Center

July 15 (Tue) 6:00PM-8:00PM

Conference Banquet

July 16 (Wed) 9:30AM-11:35AM

Room A   SCAI-SS2 & SS3

Session Chair: Cheng Chin (Newcastle University)

Wavelet Transform and Remote Sensing for Crop System Mapping in Suphan Buri, Thailand

Woraman Jangsawang, Teerayut Horanont and Kritchayan Intarat

Feasibility Study on Elevator Door State Monitoring Using Electrical Power Analysis and Non-Intrusive Load Monitoring

Pirmin Held, Daniel Weißhaar and Dirk Benyoucef

Trial on 3D Gaussian Splatting Alignment Using EXIF Information of Images and Shooting Trajectory

Shota Yamashita, Masaya Nakahara, Yoshimasa Umehara, Yoshinori Tsukada and Takumu Kuhara

ThreadsGAN: A Deep Learning-based Generative Adversarial Network for Discussion Thread Generation

Ya-Mien Cheng and Jheng-Long Wu

Room C   LTLE 3

Session Chair: Jingyun Wang (Durham University) and Yuichi Ono (University of Tsukuba)

A Game Development Method for Beginner Teams Based on Scrum

Shumpei Togo and Takafumi Tanaka

What Emotions Do We Share? Comparing Emotional Expressions in Social Computing and Real-life Setting for Teachers' Professional Development

Jo-Chi Hsiao, Shan-Mei Chang, Han-Yu Chi and Ler-Ui Lin

Assessing Reflective Learning through Human Revision of AI-Generated Essays: A Multi-Phase Study

Satoshi Kimura and Takuo Yasunaga

ELEGANCE: A customizable EducationaL gamE for foreiGn guArdians to understand japaNese sChool culturE

Xiaoyan Li, Ziliang Wang and Jingyun Wang

Room D   BMOT 3

Session Chair: Yokoyama Yuya (Advanced Institute of Industrial Technology)

Proposal of a Method of Learning Strategic Silence to Improve the Effectiveness of Employee Voice

Akiko Matsumoto and Makoto Ioki

A Unified Approach to Medical Question Answering via Knowledge Graph Integration with Large Language Models

Lien-Fa Lin and Ming-Zong Ke

Developing a Generalized Newsvendor Model for Food Waste Reduction and Supply Stability

Fumikazu Hoyano and Aya Ishigaki

Unlocking Entrepreneurial Potential: Connection to Cre-ation through a Visualizing Method for Enhancing Women's Business Networks in Tourism

Nozomi Saito, Makoto Yamasaki and Seiko Shirasaka

Room E   DSTM 1

Session Chair: Takaaki Hosoda (Advanced Institute of Industrial Technology)

The attribute framing effects that influence decision making are altered by gestures

Kaede Takamune and Kazushi Nishimoto

Solution method for vehicle routing problem with time windows considering uncertainty

Tetsuya Sato and Kenta Moriwaki

Assortment and Price Optimization under the Price-Dependent Tree Model

Jen-Yen Lin

Development of a Value Recognition Method for Working Mothers to Balance Work and Childcare based on Their Sense of Authenticity

Hanako Tajima, Seiko Shirasaka, Takashi Matsuura and Tsubasa Ito

Lottery Gambling Risk Control Measures Based on Differential Social Influence

Masafumi Nagata and Satoshi Takahashi

July 16 (Wed) 11:35AM-1:00PM

Lunch on your own (Beverage and snacks are available at Foyer)

July 16 (Wed) 1:00PM-2:40PM

Room A   SCAI 4

Session Chair: Takafumi Nakanishi (Tokyo University of Technology)

Application of Multi-Task Deep Learning in Electricity Load Forecasting and Building Energy Management

Kai-Bin Huang and Yu-Hsuan Lee

Visualization of Breathing During Piano Performance Using a Non-Contact Estimation Method Based on a Three-Point Marker System

Ayako Minematsu, Hiromu Abe and Takafumi Nakanishi

Explaining Clusters via Global Feature Importance and Automatic Labeling using Large Language Models

Takafumi Nakanishi

Room C   SBIT-SS1

Session Chair: Hiroyuki Ono (Chiba Institute of Technology)

Creating Explanatory Text for Slide-type Quizzes using Generative AI

Atsushi Shimoda and Takumi Koshika

The impact of project manager's illusion of control on QCD performance

Eri Kawano and Hironori Takuma

Study on Environmental Load Emissions of Transportation

Yohei Hara, Hiroyuki Ono and Yutaka Shirai

Room D   BMOT 4

Session Chair: Hidekazu Iwamoto (Josai International University)

The Impact of Introducing University Research Administrators(URAs) into Japanese National Universities - Strengthening Research Capabilities and Improving Reputation Management

Masakuni Taniguchi, Keisuke Uenishi and Kiminori Gemba

Changes in Visitor Circulation Behavior Due to Event Hosting in Yokohama and Yokosuka Using People Flow Data

Rino Ogose, Yuki Mekata and Hideki Katagiri

Robust Demand Forecasting Using Decomposition-Based Variable Selection in Data-Scarce Environments

Shota Kimoto, Yurika Ono, Aya Ishigaki, Daichi Arimizu, Takeru Moriyama and Takayuki Itsui

From Strangers to Community Builders: The Role of University Students in Regional Engagement and Tourism Promotion

Osamu Nakajima and Hidekazu Iwamoto

Room E   DSTM-SS1-1

Session Chair: Ryuta Takashima (Tokyo University of Science)

Comprehensive Optimization of a Hydrogen Supply Network that Integrates Production and Feedstock Systems: A Case Study of Japan

Jundai Koketsu and Aya Ishigaki

The role of Sustainable Management for Two-sided Platform Competition

Yutaro Oga, Kazuya Ito and Ryuta Takashima

Design of an Agent to Reproduce Ordering Behavior Considering Risk Aversion

Koki Shimamura, Jundai Koketsu, Aya Ishigaki, Ryuta Takashima and Hajime Nishida

Industrial Specific Evaluation For Corporate Social Responsibility

Yuki Okamoto, Yutaro Oga, Kazuya Ito and Ryuta Takashima

Room F ESKM-SS1 and ESKM 4

Session Co-Chairs: Kentaro Haraguchi (Seinan Gakuin University) and Daisuke Ikeda (Kyushu University)

Efficient Pattern Matching in Unordered Term Tree Patterns with Height Constraints

Shintaro Matsushita, Takayoshi Shoudai and Yusuke Suzuki

Change Detection for Popular Song Lyrics before and after Social Events using a Topic Model

Daichi Hishioka and Daisuke Ikeda

Ethical Considerations in AI-Driven Services: Balancing Facial Recognition and Privacy

Hiroki Tanioka

July 16 (Wed) 3:00PM-4:40PM

Room A   SCAI 5

Session Chair: Takafumi Nakanishi (Tokyo University of Technology)

Self-Expressive Outfit Recommendation via Transformer-Based Compatibility Prediction

Masataka Miyawaki, Issei Terada and Yoshitaka Kameya

LLM-Based Stepwise Dialogue and Phase-Appropriate Information Recommendation for Goal Achievement

Takayoshi Sakurai, Soki Kawashima, Ekai Hashimoto, Fuminori Nagasawa and Shun Shiramatsu

Artificial Bee Colony Algorithm for Coalition Structure Generation

Suguru Ueda and Yuta Yamamoto

Multi-User Activity Recognition in an Indoor Environment with Transformer Architectures

Md Kobir, Pedro Machado, Ahmad Lotfi, Daniyal Haider and Isibor Kennedy Ihianle

Room C   IDDC 2

Session Chair: Taishi Nemoto (University of Kochi)

The taxonomies project: coding as botanical art

Andrea Valente, Shanice Otersen and Emanuela Marchetti

A study on active inquiry learning using interactive ap-plications in science museum

Ryushi Sanada and Yasuyuki Hirai

Room D   CDEF-SS2-4 and CDEF 1

Session Chair: Masanori Hirano (Preferred Networks, Inc.)

Fine-tune or RAG? A Case Study on Solving Japanese Financial Planning Skills Examinations

Kazutaka Nishiwaki, Shunsuke Onuma and Kazuma Kadowaki

Nowcasting theme park visitor numbers and sales using SAR satellite images

Yoshihiko Ichikawa, Tetsuya Nasuda, Kaito Takano and Kei Nakagawa

Machine Learning-Based Simulation of Accounting Information's Contribution in the Municipal Bond Market

Kentaro Haraguchi, Yasuhiro Tamba, Daisuke Ikeda, Shuji Abe and Keiichi Oishi

KAN-Based Autoencoder for Constructing Three-Factor Model of Japanese Government Bond Yield Curves

Yoshiyuki Suimon and Ryosuke Yoneda

Room E   DSTM-SS1-2

Session Chair: Ryuta Takashima (Tokyo University of Science)

The Effects of Forward Contracts on Renewable Integration and Electricity Market Efficiency

Taisei Ishikawa, Kazuya Ito, Mari Ito and Ryuta Takashima

The impact of generator-side transmission charges on plant location and social surplus

Hirotaka Hiraiwa, Kazuya Ito and Ryuta Takashima

Analysis of the Effects of Riparian Bamboo on River Water Quality using Regression Analysis

Shizu Itaka, Yohei Komatsu, Ariane Gourlaouen and Tamao Kasahara

An Analysis of the Effect of Workers' Stair Movement on Construction Elevator Transportation Planning

Takuma Terasaki, Kota Funakoshi and Aya Ishigaki

July 16 (Wed) 5:00PM-6:30PM

Ice cold beer and Wine Festival at Courtyard

July 17 (Thu) 9:30AM-11:35AM

Room A   SCAI 6

Session Chair: Takafumi Nakanishi (Tokyo University of Technology)

Weed Height Estimation for Improving Weeding Efficiency in Organic Rice Cultivation

Mako Yoshimura, Soma Asuka, Kentaro Machida, Tetsuya Nakamura, Taiichiro Ookawa and Hironori Nakajo

Comment Explanation Generation on Video Platforms Using an LLM-Based Chunking Approach

Min-Chin Ho and Jheng-Long Wu

Using Visual-Descriptive Text Generation for Enhanced Multimodal Sentiment Analysis

Hsin-Yun Hsu and Jheng-Long Wu

Iterative keyword hierarchy generation using LLMs for document classification

Giada Confortola and Satoru Watanabe

Toward a Mechanism for Generating Offensive Off-topic Replies on Social Media

Gento Taniguchi and Naoki Fukuta

Room B   ESKM 5

Session Chair: Daisuke Ikeda (Kyushu University)

XABC-STS: Developing A Japanese Text Embedding Benchmark for Evaluating Word Understandings

Ryota Nishiura, Seiji Tsuchiya and Hirokazu Watabe

Person-Independent Position Estimation Using WiFi CSI with Supervised Contrastive Learning

Hidekazu Yanagimoto, Teppei Otsuki and Kiyota Hashimoto

Toward Structured Understanding of Human--Wildlife Conflict News: Malaysian Case Study on Elephant Incidents

Muhd Izzuddin Aiman Bin Zolkipli, Masato Kikuchi and Tadachika Ozono

On-Demand Instructional Material Providing Agent Based on MLLM for Tutoring Support

Takumi Kato, Masato Kikuchi and Tadachika Ozono

Comparison of Recreational Value Using the Travel Cost Method for Tokyo and Nagasaki Tourist Attractions

Ayumi Kasahara, Akihisa Kodate and Yu Ichifuji

Room C   LTLE 4

Session Chair: Lin Shengkai (Hiroshima city university)

Proposal of a One-on-One Meeting Program to Enhance the Sense of Self-Usefulness Among Residential Care Workers at a Children's Home: A Prototype-Based Evaluation

Kiyonobu Kusu, Toshiyuki Yasui, Takashi Maeno and Seiko Shirasaka

Developing Digital Games for Improving Daily Lives of the Elderly and Caregivers

Tomoki Takahashi, Fahim Khan and Ken Sakamura

Research on enhancing the accuracy of issue discrimination in local government DX skill assessment through collaborative verification using generative AI: Aiming to develop local government DX human resources based on DX literacy standards

Masahiro Sakamoto, Yukihiro Matsubara and Kousuke Mouri

Simulating Strategic Decision-Making: A Digital System for Issue-Based Educational Games

Yu-Hsun Hsueh, Ju-Ling Shih, Hsuan-Wen Chen and Chia-Chun Tseng

Dynamic Prompt-Controlled Training System Using Large Language Models for Facilitating In-Depth Customer Interview Questions

Soki Kawashima, Takayoshi Sakurai, Kohei Aoki, Ekai Hashimoto and Shun Shiramatu

Room D   CDEF 2

Session Chair: Masanori Hirano (Preferred Networks, Inc.)

Financial time series prediction with LLMs under regime switching

Rika Morita, Kei Nakagawa and Takahiro Hoshino

Learning from Double Positive and Unlabeled Data for Potential-Customer Identification

Masahiro Kato, Yuki Ikeda, Kentaro Baba, Takashi Imai and Ryo Inokuchi

Neural Additive Models for Cross-Sectional Stock Return Prediction

Koki Manabe and Kei Nakagawa

Empirical Study on the Diversification Effect of Art Assets

Rika Morita, Natsumi Machida, Kosuke Yamamoto, Kei Nakagawa and Takahiro Hoshino

Decomposing and Understanding Valuation Multiples Using Machine Learning Methods: Evidence from Japan

Enomoto Yoshiro and Kei Nakagawa

July 17 (Thu) 11:35AM-1:00PM

Lunch on your own (Beverage and snacks are available at Foyer)

July 17 (Thu) 1:00PM-2:40PM

Room A   SCAI 7

Session Chair: Takafumi Nakanishi (Tokyo University of Technology)

Dual-Rate Alpha Binary Networks: An Energy-Efficient Optimization Approach for Waste Classification

Duc-Anh Pham and Hironori Nakajo

Evaluating Sentence Filtering for Transformer-based Nepali Abstractive Summarization

Sunil Dahal and Katsuhide Fujita

Estimating the Coverage of Multiple Species of Paddy Field Weeds Using Semantic Segmentation

Yusuke Sayou, Duc-Anh Pham, Tetsuya Nakamura, Keisuke Katsura, Taiichiro Ookawa and Hironori Nakajo

Toward a Multi Agent Approach for LLM-Based Dynamic Vehicle Control and Communication in Accidental Condition

Md Ashifujjman Rafi and Naoki Fukuta

Room B   LTLE 5

Session Chair: Lin Shengkai (Hiroshima city university)

Preliminary Practices for Java Programming Tools and TDD Courses Utilizing Generative AI and Online Education

Mika Ohtsuki and Tetsuro Kakeshita

Modeling Support System of Variational Autoencoder for Image Augmentation and Anomaly Detection

Zhelin Zheng, Fusaomi Nagata, Hisami Tamano, Hitoshi Nakamura, Hirohisa Kato, Akimasa Otsuka, Takeshi Ikeda, Keigo Watanabe, Maki K. Habib and Ahmad Shahrizan Abdul Ghani

A method for converting lecture videos into microcontents and visualizing them

Masako Furukawa and Yoshitomo Yaginuma

The Process of Content Analysis for Narrative Medicine: Methodological Exploration and AI Applications

Wei-Sung Peng, Ju-Ling Shih, Chien-Da Huang and Chia-Min Ho

Room C   DSIR-SS3&SS5 and DSIR 1

Session Co-Chairs: Kenjiro Sakaki (Tenshi College), Kunihiko Takamatsu (Institute of Science Tokyo) and Naruhiko Shiratori (Tokyo City University)

Predictors of US College and University Mergers

Nicholas Sengstaken and Paul Umbach

Elucidating the Direct and Indirect Effects of Pre-admission Characteristics on First-Year College GPA: A Bayesian SEM Approach

Naruhiko Shiratori

Development of a Method for Visualizing Learning Out-comes Using Diploma Policy Achievement Levels Based on Multiple Indicators

Kenjiro Sakaki, Ryuna Hoshi and Tsuyoshi Uemura

Contradiction and Abduction: Catalyzing the Data-Driven and Hypothesis-Driven Approach in Eduinformatics

Kunihiko Takamatsu, Sayaka Matsumoto, Tsunenori Inakura, Katsuhiko Murakami, Shotaro Imai, Ikuhiro Noda, Kenya Bannaka, Yasuhiro Kozaki, Aoi Kishida, Kenichiro Mitsunari, Masato Omori, Yasuo Nakata and Masao Mori

Room D   CDEF 3

Session Chair: Yoshiyuki Suimon (Keio University)

Analysis of Factors for Improving Nonnormal Borrowers Identification Using Nonfinancial Data from Business-to-Business Transaction Networks

Tsukasa Kobayashi, Yoshiaki Narusue and Hiroyuki Morikaw

Neyman Allocation for Two-Armed Gaussian Best-Arm Identification with Unknown Variances

Masahiro Kato

Predicting Startup-VC Matches with Structural Embeddings and Temporal Investment Data

Koutarou Tamura

Conditional Diffusion Model with Volatility Estimation for Financial Time-Series Generation

Ryoya Yoshida, Masanori Hirano and Kentaro Imajo

July 17 (Thu) 3:00PM-4:40AM

Room A   ESKM 6

Session Chair: Hidekazu Yanagimoto (Osaka Metropolitan University)

Collective Wisdom for Smart Betting: A Social-Driven Esports Prediction Model

Chin-Yu Hsieh and Jyh-Hwa Liou

Augmented Data Generation and Selection for Aspect Estimation

Yusei Fukata and Kazutaka Shimada

Room B   SBIT 3

Session Chair: Yukihiro Shintani (Chiba Institute of Technology)

A Study on the Secure Transmission of Confidential Information Against HNDL Attacks

Hideki Goromaru and Genta Ohashi

How KOL Recommendations Influence Player Behavior: An Analysis of Information Cascade Phenomena through Path of Exile Item Price Fluctuations

Lien-Fa Lin and Yan-You Liu

Mapping ISO 15408 Security Functions to SDLC Phases: Insights from a Questionnaire-Based Study

Samodi Fernando, Hideto Ogasawara and Shigeaki Tanimoto

The Psychological Impact of Japan's Media Mix Strategy on 2.5-Dimensional Idol Engagement: A PLS-SEM Analysis

Liang-Chun Lu, Shih-Yung Chiu and Wan-Shan Nieh

Room C   DSIR 2

Session Chair: Naruhiko Shiratori (Tokyo City University)

Applying Text Generation AI to Assist Categorical Database Construction from Institutional Regulations

Tsunenori Inakura, Shotaro Imai, Kunihiko Takamatsu, Sayaka Matsumoto and Masao Mori

Performance Improvement on the 2024 Impact Ranking by taking University M as Example

Cherng-Min Ma, Chao-Ming Yang and Sheng-Chi Chen

Secular Changes In Career Preferences Among Medical Students in Japan

Koji Tsunekawa, Masako Kakizaki, Tsukasa Yajima and Osamu Takakuwa

Do Involuntary Enrollees in Teacher Training Courses Aspire to Teach? A Survey of First-Year Students at a Japanese National University

Ryosuke Sakurai and Takumi Watanabe

Room D   LTLE 6

Session Chair: Fahim Khan (Toyo University)

Fostering Inquiry Confidence in Elementary Students through a Game-Based Socioscientific Issue Learning Approach

Yu-Hao Lu, Ju-Ling Shih, Pinchen Chen and Geng-De Hong

SNS Ninja: An AI-Powered Cooperative Game for Mastering Social Media Etiquette

Toshiki Katanosaka, Fahim Khan and Ken Sakamura

<TechTopia> and Robots: Developing Computational Thinking in Young Learners through a Complex Board Game

Hsuan-Wen Chen, Ju-Ling Shih, Yu-Hsun Hsueh and Chia-Chun Tseng

Digital Notebook System for Digital Textbooks with Automatic Reconstruction Based on Learning Context

Moe Yamamoto and Takafumi Tanaka

July 17 (Thu) 5:00PM-6:00PM

Farewell Reception at Sea Lounge

July 18 (Fri) 9:30AM-1:00PM

Room B   Online

CDEF

Session Chair: Kei Nakagawa (Osaka Metropolitan University)

Locally Guided Global Surrogate Model for Deep Multi-Factor Models

Yugo Fujimoto, Kei Nakagawa and Kenji Oki

SBLM: Sparse Black Litterman Model using the Spike and Slab Prior

Tatsuki Masuda, Kei Nakagawa and Takahiro Hoshino

Director Skill Matrix Disclosure and Its Impact on Corporate Performance and ESG Scores: Evidence from Japan

Dai Yamawaki, Koutarou Tamura, Kaito Takano and Kei Nakagawa

Quantifying Financial and Economic Document Similarity Using Optimal Transport with Additive Compositionality

Tomoya Akamatsu and Kei Nakagawa

SCAI

Session Chair: Takafumi Nakanishi (Tokyo University of Technology)

Enhanced Recognition of Damaged Fingerprints Using Transfer Learning for Forensics

Afef Thabet, Nada Gannouni, Fatma Sioui, Jaouhar Fattahi, Mohamed Mejri and Lassaad Latrach

Lightweight Convolutional Recurrent Neural Networks for Sound Event Classification

Nayana Agrahara Dattatri, Cheng Siong Chin, Daniel Archambault and Caizhi Zhang

A Fuzzy Multi-Task Learning Framework Based on a Compressed Sensing CNN Model

Shun-Hung Tsai, Hsiang-Hung Hsu and Chih-Hua Chien

Cross Framework Comparative Analysis of Deep-ArrhyNet for High-Accuracy Arrhythmia Classification

Sayli Aphale and Eugene John

Room C   Online

ESKM

Session Chair: Daisuke Ikeda (Kyushu University)

Game Recommendation via Graph Convolution and Meta-Learning Techniques

Jian-Heng Chen, Duen-Ren Liu and Yu-Xuan Du

LTLE

Session Chair: Yokoyama Yuya (Advanced Institute of Industrial Technology)

Characteristics and Challenges of SNS Use among Adolescents with Neurodevelopmental Disorders

Chie Kato

Equity Pedagogy and the 21st Century Classroom: A Scoping Review

William Tarimo, Elizabeth Flathers and Nicholas Woods

BMOT

Session Chair: Hidekazu Iwamoto (Josai International University)

A Preliminary Analysis concerning Knowledge Creation and Performance of R&D-oriented SMEs under Uncertainty

Katsuhiro Suzuki

Social Engineering Countermeasures Based on Psychological Vulnerabilities

Shigeaki Tanimoto, Mizuki Maeda, Takashi Hatashima and Atsushi Kanai