



# MIT Newsletter

2024.9.1-2025.8.31

Department of Mathematics and Information Technology

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# Message from **Acting Head**



## **Dr. Ling Man Ho Alpha**

Acting Head of MIT Department  
Associate Professor

As we find ourselves at the crossroads of technology and insight, the impact of data science and artificial intelligence (AI) is more significant than ever. The rapid advancements in these fields not only transform industries but also hold the potential to revolutionize education for the future.

Today, data science and AI are widely integrated across various sectors, including healthcare, finance, education, and environmental science. On one hand, we can observe how predictive analytics are reshaping decision-making processes and how machine learning algorithms are deepening our understanding of complex datasets. On the other hand, it is essential to examine the ethical considerations surrounding AI deployment, highlighting the importance of transparency, fairness, and accountability. As we embrace these powerful tools, we must ensure their implementation is guided by a commitment to equity and inclusivity.

MIT continues to leverage the potential of data to drive innovation, enhance learning, and develop sustainable solutions for the future. Together, we will unlock the transformative power of data science and AI, paving the way for a smarter and more connected world.

# Meet Our **New Staff**



**Dr. Ng Tsz Kit Davy**

Assistant Professor

Dr. Davy Ng was an IT Panel Head at a secondary school in Hong Kong. He holds a PhD in Education and Technology from the University of Hong Kong (HKU).

His research interests lie in the areas of AI literacy, metaverse and STEAM education, and technology-enhanced pedagogic innovation. He has published around 50 articles, many in Q1 journals.

He has been named in Stanford's List of the World's Top 2% Scientists in Education for 2024 and 2025.

Dr. Wei Zhengyuan Jankin obtained his Ph.D. degree in Computer Science from City University of Hong Kong, where he received extensive research training that he deeply appreciates.

Before joining EdUHK, he was a post-doctoral fellow in the Faculty of Engineering at the University of Hong Kong, where he developed a new research interest at the intersection of AI and Education. His research interests primarily revolve around software engineering, with a current emphasis on the testing aspects of artificial intelligence (SE4AI & AI4SE).

Outside of research, he enjoys playing badminton and hiking, and he is open to friendships and collaborations.



**Dr. Wei Zhengyuan**

Assistant Professor

# Meet Our **New Staff**



**Dr. Zhang Junyi**

Assistant Professor

Dr. Zhang obtained his PhD degree in Statistics from the London School of Economics. Before joining EdUHK, he was a Research Assistant Professor in the Department of Applied Mathematics at the Hong Kong Polytechnic University and a Researcher in the Bocconi Institute for Data Science and Analytics (BIDSA) at Bocconi University.

Dr. Zhang's research interests include Bayesian nonparametrics and Bayesian machine learning. He is also interested in applied probability and financial mathematics problems.

Dr. Ting is passionate about increasing active learning in education. He is currently exploring collaborative generative AI pedagogies supported by YoChatGPT! to transform AI from monologue to collaborative dialogue, enhancing student learning outcomes in all dimensions.

He is leading the EDVentures Competition to inspire and ignite innovation and entrepreneurship in Asian students. As Principal Investigator of the IncentivizED project, he aims to apply reinforcement learning to foster positive behaviors in students such as active learning, physical activity, and sustainability. His goals are to provide strategies and tools to teachers to help them teach or train actively, and to empower learners with future-ready skills.



**Dr. Ting Fridolin Sze Thou**

Senior Lecturer I

# Feature Stories



## Rethinking AI Literacy—A Habermasian Framework for STEM Education

**What does it truly mean to be AI literate in today's rapidly evolving world?**

This timely question is at the heart of a recent publication that explores how artificial intelligence literacy is defined, interpreted, and interconnected with several foundational literacies. The study introduces a novel theoretical framework for AI literacy, drawing on Jürgen Habermas' three cognitive knowledge interests—technical, practical, and emancipatory.



**Ms. Heung Yuk Mui Elly**

### Bridging Theory and Practice

Recognizing the rapid integration of AI into daily life and education, the research team conducted a comprehensive systematic review of 1,603 articles, ultimately synthesizing insights from 58 high-quality studies. Their goal: to clarify what “AI literacy” truly means and how it can be cultivated across STEM disciplines.

### Habermas' Three Cognitive Knowledge Interests

The study stands out by applying Jürgen Habermas' influential framework—technical, practical, and emancipatory knowledge interests—to AI literacy:

**Technical Interest:** Focuses on the skills and knowledge needed to use and understand AI tools and systems.

**Practical Interest:** Emphasizes communication, collaboration, and the ability to interpret and apply AI in real-world contexts.

**Emancipatory Interest:** Encourages critical reflection, ethical awareness, and the empowerment of learners to question and shape the role of AI in society.

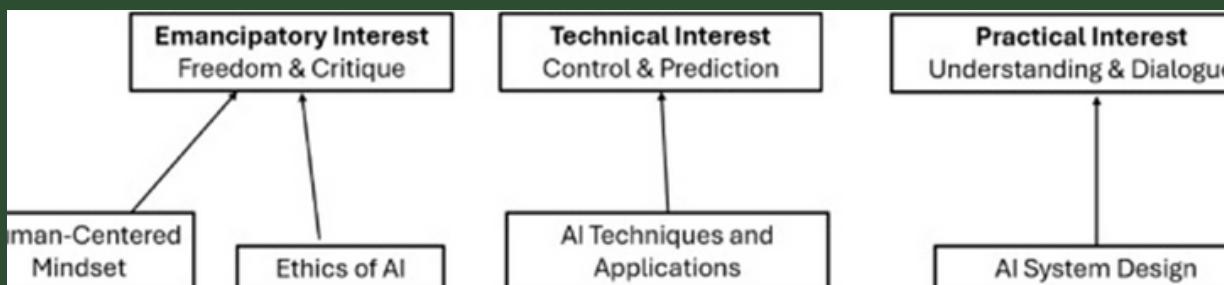


Fig. 1. Relationships between UNESCO's four dimensions and Habermas' three interests.

# Feature Stories



## Key Findings

**A Multidimensional Approach:** The review revealed that AI literacy is not just about coding or technical proficiency. It encompasses data, digital, mathematical, algorithmic, scientific, computational, media, language, and civic literacies.

**Pedagogical Recommendations:** The authors advocate for age-appropriate, culturally responsive teaching strategies.

For example, project-based and problem-based learning are recommended for older students, while game-based and playful approaches are effective for young children.

**Ethics and Citizenship:** The research highlights the importance of fostering ethical reasoning and cultural sensitivity, preparing students to become responsible and informed AI citizens.

**Interdisciplinary Collaboration:** The study calls for collaboration across STEM fields, integrating diverse perspectives to enrich AI literacy education.

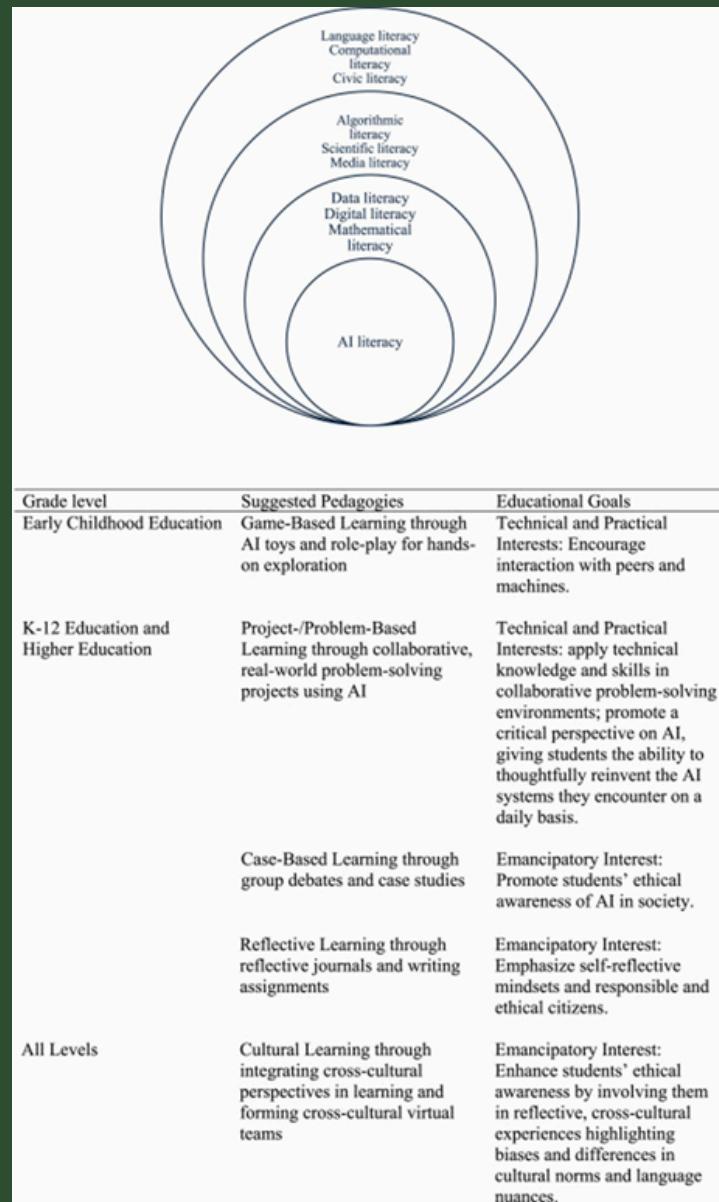


Fig. 2. AI literacy related to various literacies and its pedagogy

## Impact and Future Directions

By offering a robust theoretical foundation, this work provides educators, curriculum designers, and policymakers with practical guidance for developing comprehensive AI literacy programs. The Habermasian perspective ensures that learners are not only equipped with technical skills but also empowered to think critically and act ethically in an AI-driven world.

## Want to dive deeper?

Read the full article: <https://www.sciencedirect.com/science/article/pii/S036013152500260X>

Reference: Heung, Y. M. E., Yin, H., English, L., & Chiu, T. K. F. (2026). Theorizing AI literacy development using Habermas' three cognitive knowledge interests from a systematic review: A STEM interdisciplinary perspective. *Computers and Education*, 242, Article 105492.

# Feature Stories



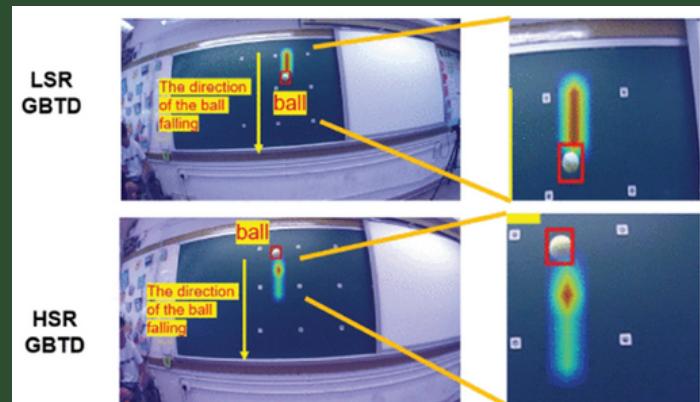
## Throw and catch: Analyzing the synchronized movements of eyes and joints in children

Throw and catch are fundamental motor skills for children, closely linked to eye-hand coordination, reaction speed, and spatial awareness. Existing research primarily focuses on attentional focus, anticipatory knowledge, and training's impact on visuomotor control, with little exploration of eye-joint movement synchronization during these actions. To clarify how such synchronization influences throw-and-catch success rates, we proposed a video-based framework: Synchronized Eye and Joint Analysis (SEJA).

This framework locates, extracts, and analyzes the essential eye and joint movements from untrimmed first-person and third-person view videos. Using the proposed framework, throw and catch events in long untrimmed videos were successfully identified, and whether each catch was successful was accurately assessed. Additionally, detailed metrics related to predictive gaze behaviors and predictive hand movements for each catch event were obtained. On a dataset consisting of videos from 56 children aged 7 to 10, the proposed framework delivered an average precision (AP) ranging from 0.5 to 0.95 at 0.881 for task localization and achieved an accuracy of 0.985 in predicting whether a catch was successful.

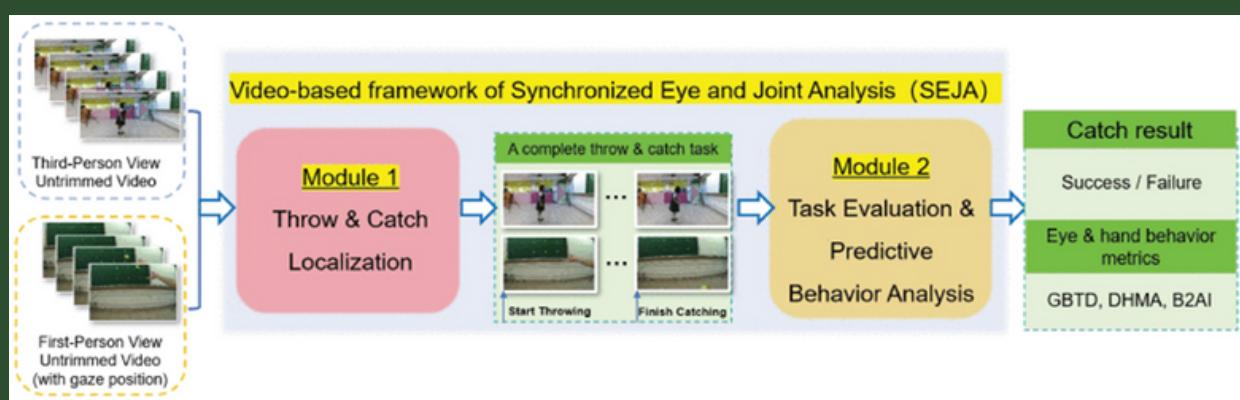


Dr. Fu Hong



He, Z., Fu, H., Li, R., Liang, Z., Chan, C. C. H., Xu, Y., & Zheng, Y. (2025). Throw and catch: Analyzing the synchronized movements of eyes and joints in children. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, 33, 994-1003.

Our research indicated that children with higher catch success rates showed shorter delays in predicting the ball's trajectory, smaller amplitudes of body movement, and more pronounced predictive saccades (rapid eye movements to anticipate the ball's position). These findings are crucial for comprehending and improving the development of motor skills in children.



# Feature Stories



## Decoding the Numbers: A Layman's Guide to Mathematical Finance

Mathematical finance is a field that uses mathematical methods to solve problems in finance, such as evaluating risks and returns on investments. It's like using mathematics to understand how money works in the real world, helping individuals and companies make informed decisions about their financial futures.

Portfolio theory is a key concept within mathematical finance. It focuses on how to combine various investments in a way that maximizes returns while minimizing risk. Imagine you have a basket of different fruits. If you only have apples (a single investment) and they don't do well, your basket isn't very valuable. But if you include oranges, bananas, and berries (a diverse portfolio), even if one fruit doesn't do well, the others may help balance things out. This way, you can achieve a more stable overall return.

Option pricing is another important aspect, dealing with how to determine the value of options, which are financial contracts that give the holder the right to buy or sell an asset at a predetermined price before a certain date. Think of it as paying a small fee now for the chance to buy something valuable in the future. The challenge lies in figuring out a fair price for that option based on various factors like the asset's current price, time until expiration, and market volatility.

In summary, mathematical finance provides the tools to understand money management, portfolio theory helps you create a balanced mix of investments, and option pricing allows you to assess the value of financial contracts.



**Dr. Chiu Mei Choi**

# Feature Stories



## Building Secure Smart Systems: AI, Blockchain, and Cyber-Physical Security Research

Dr. Li, an assistant professor from the Department of Mathematics and Information Technology, has established a remarkable early-career in AI and security. Her research covers AI application, decentralized technology, and cyber security, related to Internet-of-Things, cyber physical systems, and smart cities. For example, she worked on developing robust blockchain-based collaborative intrusion detection system. With the rapid development of cyber-physical-social-human interactions, collaborative intrusion detection will be one of the most essential security solutions in the new age.

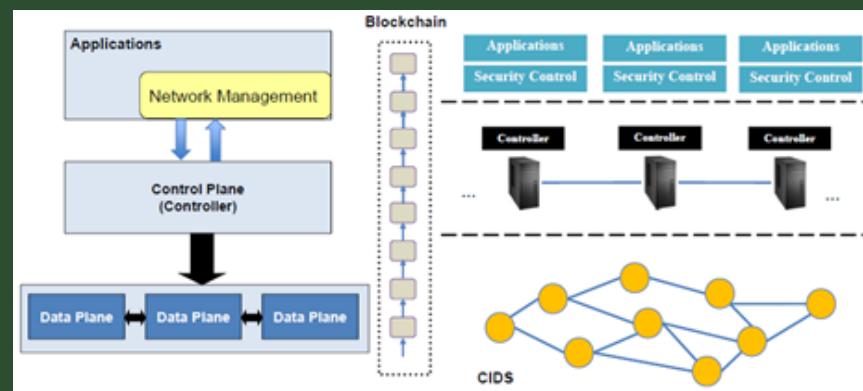


Dr. Li has strong interests in research and development of practical solutions to the community. Up to now, she has published over 120 conference and journal papers including ACM CHI, IEEE Communications Surveys and Tutorials, IEEE Transactions on Information Forensics & Security, IEEE Wireless Communications, IEEE Transactions on Network and Service Management, IEEE Transactions on Engineering Management, etc.

She is the Top 2% the most-cited scientists in the world on Stanford University List from 2021-2024. Her research outputs have received various worldwide recognitions.

For instance, she received the IEEE HITS Award for Excellence in Hyper-Intelligence Systems (Early Career Researcher award) in 2022, the IEEE ComSoc WICE (Women in Communications Engineering Committee) Early Achievement Award in 2023, and the IEEE TEMS TC on Blockchain and DLT's Early-Career Award in 2024. She is a senior member of IEEE and ACM.

**Dr. Li Wenjuan**



# Feature Stories



## Level-Specific Feedback Generation for Scene Descriptions via Fine-Tuning Multimodal Large Language Models



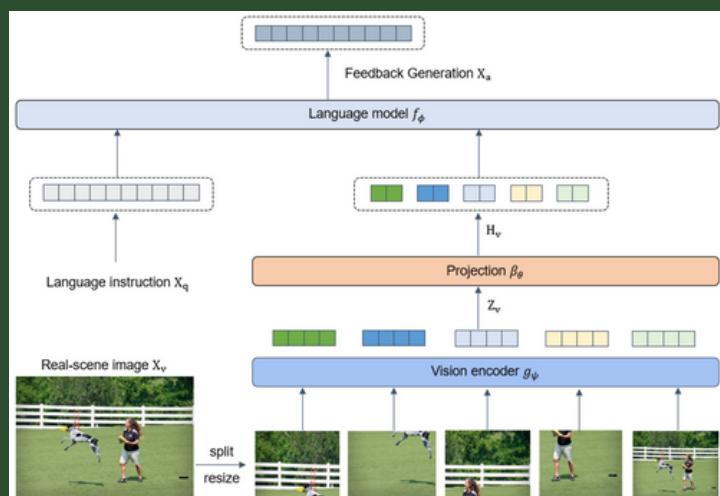
Prof Yu Leung Ho Philip

Scene description tasks effectively enhance students' English writing skills in contextual settings, facilitating the establishment of authentic situational connections. However, evaluating descriptive quality and providing accurate, level-appropriate feedback present significant challenges. Although Multimodal Large Language Models (MLLMs) have demonstrated strong capabilities in vision-language tasks, their generated feedback for scene description tasks often remains generic. It fails to account for students' educational stages.

To address this limitation, we propose a novel approach to generating level-specific feedback for scene description tasks by fine-tuning multimodal large language models (MLLMs).

While scene descriptions enhance English writing skills by connecting language learning with authentic contexts, existing feedback mechanisms often provide generic responses that fail to account for students' varying proficiency levels. We construct a curriculum-aligned dataset using GPT-4o and Retrieval-Augmented Generation (RAG), guided by Hong Kong's primary and secondary school English word lists, which categorize vocabulary into four key stages (KS1–KS4). We fine-tune an MLLM (based on Qwen-2 and ViT) on this dataset, incorporating LoRA for efficient adaptation.

Experiments compare the fine-tuned model against baselines (LLaVA-1.6, Llama 3.2-Vision, GPT-4o) using expert evaluations and semantic similarity metrics (SBERT). Results show the fine-tuned model achieves higher correctness (88–90.5%), readability (90–97%), and educational effectiveness (90–98%) across stages, with fewer out-of-level vocabulary suggestions. A pilot study with 66 students confirms that level-specific feedback leads to greater learning gains than generic feedback.



We adopt ViT as the vision encoder for visual feature extraction, Qwen-2 as the foundational LLM for language understanding, and a two-layer MLP as the vision-language connector to enhance multimodal alignment.

Reference: Xie, Z., Chan, T.T. and Yu, P.L.H. (2025). Level-specific feedback generation for scene descriptions via fine-tuning multimodal large language models. *Computers and Education: Artificial Intelligence*. Vol. 9, 100510.

# Students Corner & International Engagement

- **The 2024-25 "Tencent Little Safflower" Community STEAM Scholars Award has successfully concluded.**



Supported by MIT's team (Dr. Ling Man Ho, Dr. Lo Chung Kwan, Dr. Cheung Ho Yin, Ms. Xie Yishan, Ms. Heung Yuk Mui, Ms. Huang Xiaomei, Ms. Xu Simin), the award nurtures secondary students to apply their STEAM knowledge and creativity to enhance the quality of life of the disadvantaged.

- **Summer Day Camp 2025 - A journey into the mysteries of AI and mathematics**



The Summer Day Camp 2025 was successfully held in The Education University of Hong Kong, Tai Po Campus, on 1st August 2025. Lectures were delivered by our academic and teaching staff on the following topics:

- From Mathematics to Intelligence: The Power of Modelling
- Enhancing Learning: Creating Your AI Learning Companion

During the Camp, participants engaged with lectures on mathematics, AI and their applications in education.

- **To broaden students' STI global perspective, EdUHK's MIT organized a 1–8 July 2025 Sydney study tour.**

The tour included academic visits to the University of Sydney and UTS, where students engaged with local faculty and explored learning environments.

Key highlights included a Taronga Zoo Discovery Tour (focused on ecological science and conservation), a visit to the Australian National Maritime Museum (maritime innovation and seafaring tech), and a Hunter Valley Segway tour (hands-on mobility technology experience). The immersive itinerary enabled students to gain insights into Australia's sustainability, scientific research, and tech development, enhancing their academic and cultural understanding globally.



Academic visits to the University of Sydney



Academic visits to the University of Technology Sydney



Australian National Maritime Museum, where they learned about maritime innovation and technological advancements in seafaring history



A Segway tour in Hunter Valley provided a hands-on encounter with mobility technology in a real-world setting

- **Guangxi Normal University - the Education University of Hong Kong Exchange Activity Successfully Held at The Education University of Hong Kong**

Guided by director of LTTC Dr. CHENG Kwok Shing Gary and associate head Dr. Sun Daner of MIT, EdUHK, the visiting group toured the EdUHK library, the MIT Lab, and the LTTC Metaverse Lab, where they enhancing their understanding of AI applications in education and research. The event fostered vibrant discussions and collaborations, paving the way for future research initiatives between the two institutions.



In the sharing session, MIT Acting Head Dr. Ling Man Ho Alpha and Associate Head Dr Sun Daner delivered opening remarks. At the sharing session, three outstanding EdUHK students shared their research on GenAI-Facilitated Drone-based Cross-disciplinary STEM Education and AI Teaching Tools in International Schools, plus their EdUHK study-life experiences, while GXNU faculty and students gained an immersive experience of cutting-edge educational technology.

Guangxi Normal University - the Education University of Hong Kong Exchange Activity not only shared knowledge, but also planted the seeds for future joint programs in educational technology. Both universities will utilize advanced educational technology to promote advanced teaching methods for the 21st century, so that participants will be inspired to implement these innovations in their respective educational environments.



- **GBA trips in March 2025**

The Department of Mathematics and Information Technology at The Education University of Hong Kong successfully organized a series of immersive academic trips to the Greater Bay Area (GBA), fostering students' understanding of regional development and technological innovation.

### Mathematics Visits



Led by Mr. Lee Yat Fai (Mar 13–14) and Dr. Poon Kin Keung & Dr. Cheng Hiu Fai (Mar 19–20), mathematics students and teachers participated in a cultural and educational exchange in Guangzhou.

During the visits, participants explored historical and cultural landmarks such as Shamian Island and Yongqing Fang, providing insights into the city's colonial past and modern transformation. They also visited the Nansha Minxin School for Hong Kong Children, gaining valuable exposure to cross-border education initiatives that bridge the two systems.

### Information Technology Visit



Highlights included the Shenzhen Museum, offering a rich historical narrative of the city's rise as a tech powerhouse, and the Gao Ju Collaborative Innovation Education Base, which showcases emerging education technologies. Students also visited the Guangdong Science Center and the GAC Technology Museum, where they engaged with cutting-edge exhibits on automotive engineering and green technologies.

- **BSc(AI&EdTech) student Lo Wai-kin was awarded the Silver Medal at the 50th International Exhibition of Inventions Geneva.**



Mr. Lo Wai-kin received the Silver Medal in the 50th International Exhibition of Inventions Geneva. His project, titled Sign2V: Connecting Sign Language to the Verbal Sphere, was conducted in collaboration with Dr. So Chi Fuk Henry.



This achievement was also featured in Sing Tao Headline Education Section on 2 July 2025, highlighting the University's efforts in promoting research and innovation through AI-powered sign language translation systems.

- **BEd(ICT) students earned the distinguished Bronze medal at the HK Techathon+2025 competition**



On 19 January 2025, fourth-year BEd(ICT) students Ms. Ng Wing Kiu Joanne and Ms. Chan Wai Yi Kelly won the Bronze Medal and a HKD 3,000 cash prize at HK Techathon+2025. Mentored by Dr. Singh Manpreet, they created the mental health app Oasis, which lets users book personalized stress relief booths with meditation and counseling services.

The project exemplifies the potential of tech-enabled mental health support and underscores students' role in boosting community well-being, offering a practical and accessible solution for improving public mental health in a fast-paced society.

# Graduates Testimonial

## EdUHK Mathematics Education Alumni Association Hosts Successful Reunion Event



On 20 January, The Mathematics Education Alumni Association hosted an alumni reunion. Guest of Honour Prof. Cheung Bing Leung Anthony (GBS, JP), EdUHK's fourth President, and Hon. Chu Kwok-keung (Legislative Council Member for Education & Chairman of EdUHK Alumni Association) attended the event, alongside principals from primary, secondary and kindergarten schools, and EdUHK alumni. The gathering included the "3rd Inauguration Ceremony" of the association, with heartfelt exchanges between attendees—especially reunions of former teachers, classmates and students—fostering valuable sharing of experiences and friendships.

## "The New Perspectives of Mathematics Education" Seminar



On 28 June, our department hosted the "The New Perspectives of Mathematics Education" seminar, drawing 45 educators, alumni, and other participants. Dr. Ling Man Ho, Acting Head, delivered a welcome speech and presented certificates/trophies to speakers and distinguished alumni: Dr. Mun Yee Lai, Dr. Dichen Wang, along with experienced scholar and former EDB professional Mr. Chun Yue Lee. They shared innovative teaching strategies (hands-on aids, tech-enhanced virtual tools), with Mr. Lee emphasizing math modeling and AI integration in modern math education. The seminar featured insightful exchanges and lively discussions, benefiting all attendees.

# Graduates Testimonial



During my study in the MSc in Artificial Intelligence and Educational Technology programme, I gradually developed a comprehensive understanding of how AI can be integrated into teaching, learning and assessment. The programme's theoretical training and hands-on coursework enabled me to examine educational problems from a broader perspective and explore how emerging technologies could provide meaningful solutions. I also engaged in several research-oriented and applied projects, such as learning analytics-based visualisation design and prototype development for AI-enhanced learning tools, which helped me translate technical knowledge into practical educational applications.

## Jia Fenglin

2021–2022 MSc(AI&EdTech) Cohort

One project that particularly shaped my academic interests was an AI-assisted scaffolding project. By analysing students' learning behaviours and progression patterns, our work aimed to design an intelligent system capable of generating adaptive support. This experience offered me a deeper understanding of how AI can facilitate personalised learning and informed my belief that technology should ultimately empower both teachers and learners. Reflecting on the programme, working with peers from diverse backgrounds and navigating rapidly evolving technologies allowed me to form a clearer vision for my future development.

I am now pursuing my PhD at The Hong Kong Polytechnic University, where I continue to explore the intersection of AI and education. My aspiration is to design intelligent learning tools that are both pedagogically meaningful and practically usable, and to contribute to building more inclusive, innovative and learner-centred educational environments in the years ahead.

# Graduates Testimonial



**Chow Shun Hei, Haysan**

2021–2023 MSc(AI&EdTech) Cohort

I completed my BEd (Hons) in Secondary ICT at The Education University of Hong Kong in 2021, where I learned to fuse solid computing knowledge with contemporary pedagogy. That experience grounded me in STEAM thinking—creativity, collaboration, problem solving, and critical reflection—and gave me the confidence to design inquiry-rich, project-based learning that connects code, data, and design to real-world problems.

From 2021 to 2023, I pursued the MSc in Artificial Intelligence and Educational Technology, which pushed me to turn emerging tools into meaningful classroom practice. I explored VR/AR for immersive concept exploration, used learning analytics to inform adaptive feedback, and experimented with robotics and AI-assisted assessment to personalise pathways and make complex ideas tangible for secondary learners.

Professionally, I served for two years as STEAM Head at Logos Academy, leading cross-curricular initiatives, mentoring teachers, and coaching student teams. These efforts culminated in recognitions such as RoboMaster Tournament 2024 (3rd Runner-up) and the Little Sunflower Programme Merit Award for an AI companion robot designed to support conversation with elders. I also shared the possibilities of VR in secondary education on the TV programme Frontline search, focusing on authentic tasks, safety, accessibility, and measurable learning impact.

I have since transitioned to a new school, where I am the ICT Subject Panel Head. In this role, I oversee curriculum alignment and assessment, steward digital strategy and cybersecurity practices, build teacher capacity in AI/VR/robotics integration, and partner with departments to deliver rigorous, project-based STEAM learning that is equitable and scalable.

In 2025, I began my Doctor of Education at EdUHK to investigate how AI-enhanced tools and analytics can support sustainable whole-school innovation. My goal is to design evidence-based, teacher-friendly solutions that elevate student agency, make feedback more timely and actionable, and cultivate inclusive, future-ready learning environments.

# Graduates Testimonial



During my studies in the MSc in Artificial Intelligence and Educational Technology programme, I developed a systematic understanding of how AI deeply integrates into teaching, learning, and assessment, while also delving into theoretical and practical research in deep learning. The programme combined rigorous theoretical training with hands-on coursework - the former built my cognitive framework for AI educational applications, while the latter enabled me to analyze educational pain points from a macro perspective and explore targeted solutions through emerging technologies, laying a solid foundation for my subsequent research projects.

## Huang Yichuan

2024–2025 MSc(AI&EdTech) Cohort

One key project was a classroom facial expression recognition system, designed to help teachers promptly capture students' learning emotional states. I built the recognition framework with a basic deep learning model, labeled thousands of classroom facial expression datasets, and ultimately achieved high real-time recognition accuracy. In tests, the system quickly relayed students' emotional tendencies, allowing teachers to adjust their teaching rhythm in a timely manner and helping me intuitively grasp the practical value of AI in teaching scenarios.

I am currently working as a research assistant at The Education University of Hong Kong, continuing to explore AI applications in the visual field.

# Graduates Testimonial



**Liu Tong Tony**  
2024–2025 MSc(AI&EdTech) Cohort

As a graduate of the Master's program in Artificial Intelligence and Educational Technology at The Education University of Hong Kong, my background might seem unconventional—my undergraduate degree was in a completely unrelated field of engineering. So why did I choose this path? It stemmed from my observation of a subtle disconnect between students' tech-rich daily lives and the often closed-off, traditional learning environments that feel like relics of the past. I believed technology could bridge this gap, making education more engaging and relevant.

Before starting, I felt anxious. Many classmates had strong programming skills or educational theory knowledge, while my experience lay elsewhere. However, the program's flexible structure, with various elective courses, allowed me to adapt and grow at my own pace. Over the year, I not only improved in programming and foundational pedagogy but also discovered a strong interest in designing innovative learning environments—aligning perfectly with my original motivation.

Now, as I continue my research within the Mathematics and Information Technology department, my primary goal is to effectively incorporate the practical and systematic mindset from my engineering background into contemporary educational approaches. By doing so, I strive to make the learning process not only more engaging and interactive, but also truly dynamic and exciting—transforming classrooms into innovative environments where students can experience education as something refreshingly cool and deeply inspiring.

# Graduates Testimonial



We are living in an era filled with competition and challenges. The large number of graduates has intensified competition in the job market, leading to longer job search cycles. The appeal of many traditional career paths, such as civil service and institutional positions, once considered “respectable,” has undergone significant shifts. Yet this is also a time of remarkable possibility. The emergence of new tools like AI has opened up more avenues for us. We can use AI to assist in our job search, from resume optimization to interview simulation, leveraging technology to improve our efficiency and preparedness.

**Liu Zhaolong**

2024–2025 MSc(AI&EdTech) Cohort

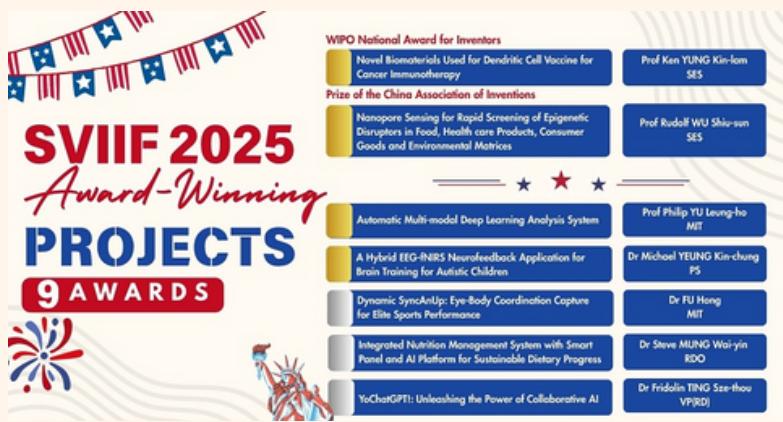
Moreover, the digital economy continues to give rise to new professions, and society is increasingly accepting and respecting diverse career choices.

My own journey in the MSc programme in Artificial Intelligence and Educational Technology has been particularly meaningful in this context. It provided me with a solid foundation in how intelligent technologies can transform learning and assessment, alongside hands-on experience in applying deep learning concepts to real educational challenges. This background has taught me to analyze systemic needs and explore how technology can offer meaningful solutions. It is a perspective that I believe is valuable not only in education but across many fields undergoing digital transformation.

This is an era we are all navigating together. Do not feel lost or anxious. Take action, keep exploring, and you will find your own distinct path to success.

# Awards and Research Highlights

## EdUHK Achievements at SVIIF 2025



EdUHK claimed 9 awards (2 on-stage special awards, 4 Gold, 3 Silver) at the 2025 Silicon Valley International Invention Festival for 7 AI, healthcare, and smart living innovations. Professor Philip Yu Leung Ho, Dr. Fu Hong, and Dr. Fridolin Ting Sze Thou led medal-winning projects.

Two flagship projects in the healthcare sector earned top honours. The first, titled “Novel Biomaterials Used for Dendritic Cell Vaccine for Cancer Immunotherapy” and led by Prof. Ken Yung, received the WIPO National Award for Inventors and a Gold Medal. The second, “Nanopore Sensing for Rapid Screening Epigenetic Disruptors in Food, Healthcare Products, Consumer Goods and Environmental Matrices,” led by Prof. Rudolf Wu, was awarded the Prize of the China Association of Inventions and a Gold Medal.

During the event, the Knowledge Transfer Sub-office showcased the University’s latest research achievements in artificial intelligence, biomaterials, neuroscience, sports sciences and educational technologies to Mr. DC Cheung, Director of the Hong Kong Economic and Trade Office in San Francisco. The EdUHK delegation also met with exhibitors from around the world and with technology companies from Silicon Valley. The Hong Kong delegation, comprising 50 participants from 8 institutions, including universities, research and development centres, and technology companies, showcased 43 pioneering projects and garnered about 50 awards (9 for EdUHK) at the exhibition. Amid this success, the EdUHK’s achievements exemplify its dedication to making technology serve not only as a tool for advancement, but also as a means to address societal needs and enrich everyday living.

# Awards and Research Highlights



## EdUHK's Excellence Recognized: Awards from 2 Prestigious Platforms

Dr. Ling Man Ho Alpha received the Best Presentation Award in the 7th International Conference on Computational Science and Technologies in Education (CSTE) held in Wuhan, China, April 18-20, 2025.

Presentation entitled "A Data-Analytic Approach to Early Detection of At-Risk Students in Higher Education".

Professor Yu Leung Ho Philip, Dr. Fu Hong, and Dr. Ting Fridolin Sze Thou were awarded Gold and Silver Medals, along with the Organizer's Choice Award and two Special Awards, for their outstanding projects.



Dr. Ling Man Ho Alpha received the Best Presentation Award in the 7th International Conference on Computational Science and Technologies in Education

# Awards and Research Highlights



**Dr. Li Wenjuan received the Best Paper Award in the 27th IEEE International Conference on Computational Science and Engineering**

Dr. Li Wenjuan received the Best Paper Award in the 27th IEEE International Conference on Computational Science and Engineering (IEEE CSE 2024) held in Sanya, Hainan China, 17-21 December 2024.

The Conference aims at bringing together researchers and practitioners in the world working on addressing these computing challenges on science and engineering, and providing a forum to present and discuss emerging ideas and trends in this highly challenging research field.

Dr. Li Wenjuan received the IEEE TEMS TC on Blockchain and Distributed Ledger Technologies Early-Career Award in 2024. The IEEE TEMS TC on Blockchain and DLT's Early-Career Award recognizes an early-career researcher from either academia or industry who has demonstrated outstanding contributions to blockchain and DLT. Emphasis will be given to the significance and impacts of the research work led by the nominee, for example in terms of publications on blockchain and DLT in premier conferences and/or journals, and/or grant patents relating to blockchain and DLT, consistently for a period of at least five years.



**Dr. Li Wenjuan received the IEEE TEMS TC on Blockchain and Distributed Ledger Technologies Early-Career Award in 2024**

# Awards and Research Highlights

## EdUHK MIT Student Wins Dual Awards at International AI in Education Competition on a VR Fencing Project

Mr. Zhao Hengjie Jay, a graduate of the Master of Science in AI and Educational Technology programme, has achieved remarkable success at the 2025 AIREA International Competition on AI in Education. His innovative project, titled “Fencing in the Metaverse Revolutionizing Training with Virtual Reality,” was awarded First Runner-Up and the Outstanding Innovation and Creativity Award. This accomplishment underscores the department’s leadership in integrating artificial intelligence with educational innovation.



Jay's master capstone, supervised by Dr. Sun Daner and mentored by Dr. Yang Yin Nicole, leverages VR (Meta Quest 3), AI coach, real-time motion analysis, and adaptive opponents via Unity engine (custom physics modeling). The fencing training system offers structured tutorials, scenario practice, and instant feedback, addressing traditional fencing's high cost, limited access, and injury risks with an immersive, accessible, and safe solution. Dr. Yang praised its technical creativity and AI's sports education potential, noting the department's continued support; competition judge Prof. Shen Jun (University of Wollongong) highlighted its practical significance and strong application potential. This international recognition underscores Jay's talent and EdUHK's commitment to interdisciplinary innovation and cutting-edge research, with ongoing support for student-led AI/VR initiatives.

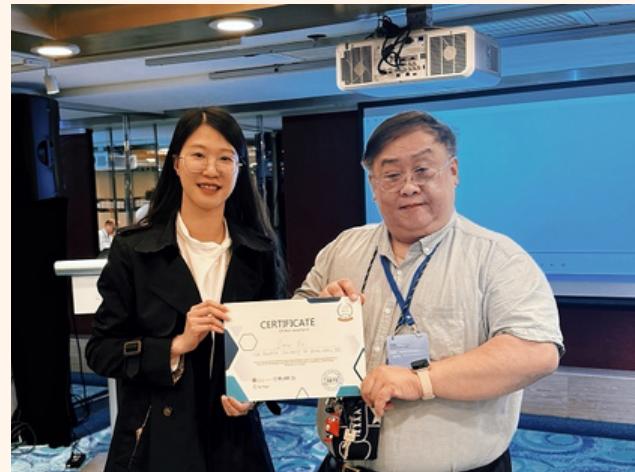
# Awards and Research Highlights



Our department's innovative project, "EdUAI: Personalized Math Learning" has been awarded the 9th International Invention Innovation Competition in Canada (iCAN2024) Silver Medal and a Special Award for its innovative contributions to educational technology. This innovative AI-assisted application is spearheaded by our BSc-AIET graduate, Mr. Wong Chi On (Class of 2024), and his project supervisor, Dr. Henry So.

## "EdUAI: Personalized Math Learning" Won iCAN2024 Silver Medal and Special Award

Ms. XU Simin, a PhD student, was honoured with the Best Presentation award at the 4th Asia Education Technology Symposium (AETS2024), held from November 8 to 10, 2024, in Hong Kong. She presented her paper, "Visual Learning Analytics-supported Teacher Reflection on Synchronous Online Mathematics Instruction: Insights from a Stimulated-recall Interview," which she co-authored with her supervisors Dr. LO Chung Kwan and Prof. SONG Yanjie from MIT and Dr. CHEN Gaowei from HKU. The paper will be published in Springer Book Series Lecture Notes in Educational Technology.



**Ms. XU Simin honoured at AETS2024 for best presentation**

# Awards and Research **Highlights**



For more information please visit

Event	Link
49 EdUHK Scholars Named World's Top 2% Scientists by Stanford University	<a href="https://www.eduhk.hk/en/press-releases/49-eduhk-scholars-named-world-s-top-2-scientists-by-stanford-university">https://www.eduhk.hk/en/press-releases/49-eduhk-scholars-named-world-s-top-2-scientists-by-stanford-university</a>
Dr. Leung Yu Hin has been awarded the Outstanding FLASS Alumni Award	<a href="https://www.eduhk.hk/mit/zhs/event/20240905news1">https://www.eduhk.hk/mit/zhs/event/20240905news1</a>
Outstanding Research Achievements of Award-Winning PhD Students	<a href="https://www.eduhk.hk/mit/zhs/event/20241023news1">https://www.eduhk.hk/mit/zhs/event/20241023news1</a>
Huawei ICT Competition 2024 - Cloud Track Potential Prize	<a href="https://www.eduhk.hk/mit/zhs/event/20241207news">https://www.eduhk.hk/mit/zhs/event/20241207news</a>
Dr. Li Wenjuan received the Outstanding Paper Award in IEEE TrustCom 2024	<a href="https://www.eduhk.hk/mit/zhs/event/20241217news2">https://www.eduhk.hk/mit/zhs/event/20241217news2</a>
Mr. Cloof Siu received the Gold Award in HK Outstanding Prospective Teachers Award	<a href="https://www.eduhk.hk/mit/zhs/event/20250405news">https://www.eduhk.hk/mit/zhs/event/20250405news</a>
EdUHK–ECNU Young Scholar Forum 2025 Successfully Held at EdUHK	<a href="https://www.eduhk.hk/mit/zhs/event/20250430news">https://www.eduhk.hk/mit/zhs/event/20250430news</a>
Dr. Li Wenjuan attended the Learning and Teaching Expo 2025 as a Speaker	<a href="https://www.eduhk.hk/mit/zhs/event/20250704news">https://www.eduhk.hk/mit/zhs/event/20250704news</a>
EdUHK's Excellence Recognized: Awards from 2 Prestigious Platforms	<a href="https://www.eduhk.hk/mit/zht/event/20250918news">https://www.eduhk.hk/mit/zht/event/20250918news</a>

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