NEWSLETTER

ASI Global

December 15, 2025

FEATURED STORY

ASI Global Shares Practice-Based Insights on International Competence at the 2025 World Young Scientist Summit

ASI Global participated in the **University Education and Future Talent Development Forum**, held on October 24 as part of the **2025 World Young Scientist Summit** at Wenzhou-Kean University, where it shared practice-based insights on cultivating internationally competent talent in the context of artificial intelligence and globalization. Through its contribution to the forum, ASI Global highlighted a scalable education model that integrates curriculum design, experiential learning, and ecosystem building, offering concrete pathways to prepare future-ready talent.

The forum brought together senior academics and higher education leaders from diverse global contexts to create a high-level platform for dialogue on the future of university education. Set against the rapid advancement of artificial intelligence and deepening global interdependence, discussions at the forum examined how universities can rethink talent development beyond knowledge transmission, and how higher education can cultivate graduates with the capabilities needed to navigate complex global challenges.

From left to right: ***Prof. Qingzhong Pan,*** *Executive Associate Dean of Schwarzman College, Tsinghua University, and Vice Chair of the International Competence Development Committee;* ***Mr. Changchui He****, Former Deputy Director-General of Food and Agriculture Organization of the United Nations and Vice Chair of the International Competence Development Committee;* ***Dr. Ning Zhang****, Vice President of the Chinese Society of Educational Development Strategy and Chair of the International Competence Development Committee;* ***Prof. Hong Wang****, Professor at Beijing Sport University and Vice Chair of the International Competence Development Committee;* ***Mr. Edison Yan****, Executive Director of ASI Global and CEO of GEC Academy.*

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Invited to speak at the forum, **Dr. Ning Zhang**, Vice President of the Chinese Society of Educational Development Strategy and President of the International Competence Development Committee, called on universities to proactively lead educational transformation in response to the accelerating impact of artificial intelligence. He stressed that higher education must shift "from knowledge transmission to competence building," supported by more intelligent, personalized, and internationally oriented teaching models. Dr. Zhang also highlighted the need for evaluation systems that prioritize continuous learning and innovation, noting that such changes are essential for preparing students to navigate an increasingly complex global environment.

Mr. Edison Yan, Executive Director of ASI Global and CEO of GEC Academy, delivered a thematic presentation titled "**ASI Global's Practices in Cultivating Internationally Competent Talent**."

In his remarks, Mr. Yan noted that amid profound shifts in the global landscape, international competence is increasingly becoming a core capability for young people engaging in cross-border collaboration and global affairs. He then introduced ASI Global's integrated "Curriculum–Practice–Ecosystem" model, which is designed to translate international competence education from conceptual frameworks into scalable, institution-level practice.

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Mr. Yan further explained that ASI Global has collaborated for years with former senior officials from the United Nations and other international organizations, as well as leading scholars from China and abroad, to develop a structured Global Competence Development curriculum. Organized around five interconnected modules, from global governance literacy to practical engagement with international organizations, the Global Competence Development project integrates knowledge, values, attitudes, and transferable skills. To date, the project has been implemented at more than 65 universities, with its educational outcomes receiving broad recognition.

Emphasizing that international competence education extends beyond course design alone, Mr. Yan underscored the importance of building a holistic and sustainable talent development ecosystem. Through initiatives such as the LUMINAI Public Lecture series, Global Masters Talk, faculty development programs, Technical Sponsorship Conferences, and cultural and educational initiatives including the Hello, Hanzi book series, ASI Global has gradually established a four-dimensional ecosystem linking student empowerment, faculty development, institutional collaboration, and cultural communication. This ecosystem-based approach, he noted, aims to support the development of globally engaged graduates with strong adaptive capacity and cross-cultural communicative competence.

Building on our continued engagement in global education initiatives, ASI Global will remain committed to advancing the cultivation of internationally competent talent with a strong global vision and practical capability. Looking ahead, we will deepen our collaboration with universities and partners, further refine our integrated education models, and contribute to the development of a more open, connected, and sustainable international education ecosystem for the next generation.

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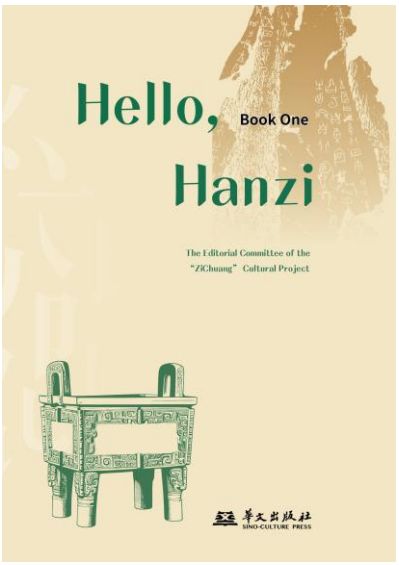
Hello, Hanzi Book 1 Is Now Available on Major Global Platforms

We're more than delighted to announce that Hello, Hanzi – Book 1 has officially been published and is now available on several major global digital reading platforms. You can now find Hello, Hanzi Book 1 on the following platforms:

- Amazon Kindle
- Apple Books
- Kobo
- Thalia
- Smashwords
- Angus & Robertson
- Vivlio
- Fable

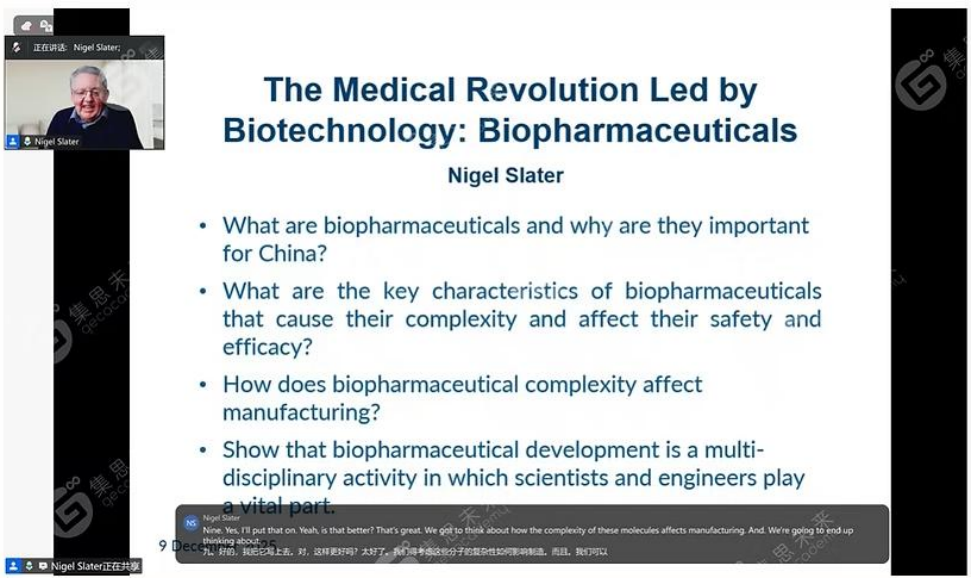


We'll continue to expand its global reach and support learners, educators, and families across different learning contexts, and we look forward to sharing more updates as the series grows.

LUMINAI Public Lecture Recap

The Medical Revolution: Decoding Biopharmaceuticals with Professor Nigel Slater

On December 9, ASI Global was honored to once again host **Professor Nigel Slater, Emeritus Professor of Chemical Engineering and former Pro-Vice-Chancellor of the University of Cambridge**, for the final session of the 2025 LUMINAI Lecture Series. As a long-time guest speaker for ASI Global, Professor Slater returned with a talk titled "**The Medical Revolution Led by Biotechnology: Biopharmaceuticals**." Speaking to hundreds of university students across China, he explored the structural complexity, regulatory challenges, and evolving innovation landscape shaping today's biopharmaceutical industry.



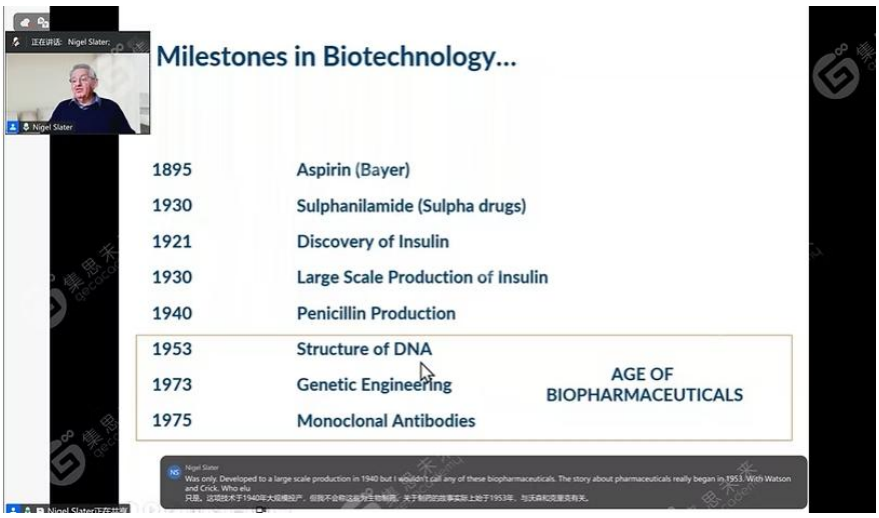
Lecture Topic: The Medical Revolution Led by Biotechnology: Biopharmaceuticals

- **The Golden Age of Biopharmaceuticals**

Professor Slater opened by distinguishing modern biopharmaceuticals from traditional small-molecule drugs such as aspirin and penicillin. While these earlier medicines defined much of twentieth-century healthcare, today's biopharmaceuticals, including monoclonal antibodies, recombinant proteins, gene therapies, and mRNA vaccines, emerged from a scientific revolution that began with the discovery of DNA in 1953.

He emphasized that we are now living through a major expansion of this sector, especially in China. Drawing on recent data from the Financial Times and China's 15th Five-Year Plan, he highlighted that China's investment in pharmaceutical R&D is increasing at one of the fastest rates in the world, surpassed only by transport and aerospace. For students and early-career professionals, this trend signals a field full of opportunity and growing demand for skilled talent.

LUMINAI Public Lecture Recap

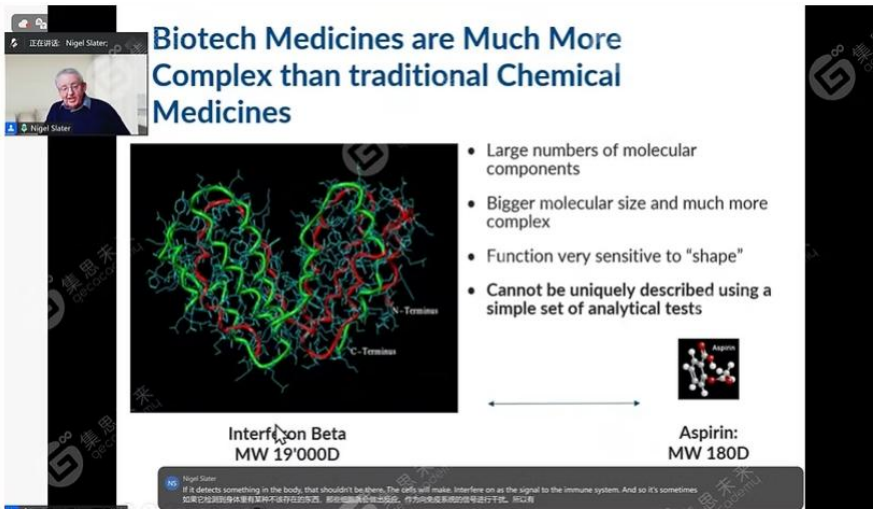


The age of biopharmaceuticals began in 1953.

- **The Inherent Complexity Drives the "Safety First" Imperative**

One of the lecture's central themes was the immense challenge of ensuring safety in biopharmaceutical manufacturing. Historical events, including early diphtheria antitoxin incidents and production issues with polio vaccines in the 1950s, illustrate why strong safety standards are essential.

Professor Slater explained that this "Safety First" imperative stems directly from the inherent structural complexity of biopharmaceuticals. Unlike small-molecule drugs that are uniform and easy to characterize, biopharmaceuticals are large, intricately folded proteins that can vary slightly from batch to batch. Glycosylation, oxidation, and other micro-variations can lead to significant molecular heterogeneity. As a result, ensuring quality and safety becomes a demanding engineering problem that requires deeply controlled processes, robust analytics, and precision-driven manufacturing to protect patients.

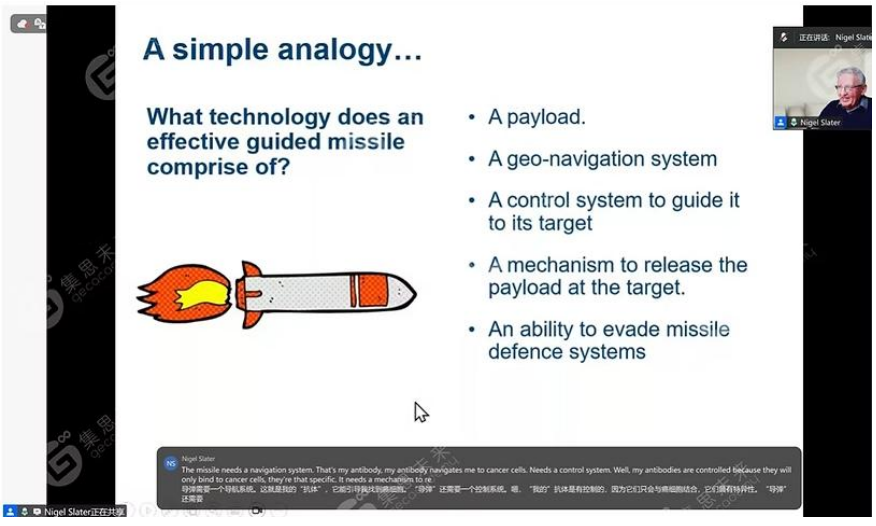


The inherent structural complexity of biopharmaceuticals.

LUMINAI Public Lecture Recap

- **Targeted Precision: Monoclonal Antibodies and ADCs**

The discussion then turned to monoclonal antibodies, one of the most successful categories of biopharmaceuticals. Their ability to recognize specific molecular targets allows for highly selective therapies. Building on this foundation, Professor Slater introduced Antibody–Drug Conjugates (ADCs), one of the fastest-growing therapeutic classes worldwide. By combining the targeting precision of antibodies with the potency of small-molecule drugs, ADCs deliver toxic payloads directly to cancer cells while sparing healthy tissue. Professor Slater compared them to "guided missiles": the antibody identifies the target, the drug acts as the warhead, and the linker ensures controlled release. Designing ADCs requires an intricate balance of stability, potency, and safety, reflecting the increasing sophistication and interdisciplinary nature of today's biopharmaceutical engineering.



ADCs function like guided missiles.

- **The Future: AI and Interdisciplinary Careers**

By the end of the lecture, the conversation addressed the future of technological integration. Professor Slater was unequivocal in his assessment that "AI is the future" of biopharmaceuticals. He provided examples of how machine learning is being applied to predict batch failures in antibody production, thereby optimizing resource allocation and quality control. Finally, he stressed that solving future biological and engineering challenges necessitates an interdisciplinary framework, requiring synergistic expertise from biology, chemistry, and data science.

As we wrap up the 2025 LUMINAI Lecture Series, we extend our sincere thanks to all the guest speakers and students who joined us throughout the year. Looking ahead to 2026, we plan to continue expanding this series with more distinguished scholars, including Nobel laureates, global policymakers, and educational leaders who will explore the future of education in an AI-driven world. With a goal to bring students fresh perspectives, cutting-edge developments, and deeper insights into the rapidly evolving landscape of science, technology, and education, we are looking forward to seeing you next year for another season of learning, exploration, and inspiration.

Faculty Work Gallery

*This month we introduced **a paper** co-written by **Professor Osman Yağan, Research Professor at Carnegie Mellon University.** If you are interested in showcasing your research, grants, book releases, conference presentations, or any work you deem valuable and interesting to share, please feel free to contact us.*

Osman Yağan
Research Professor
Department of Electrical and Computer Engineering & CyLab & IDeaS & ICSD
Software and Societal Systems Department, School of Computer Science (Affiliate Faculty)
Carnegie Mellon University

Recent Highlights

- E. C. Elumar, C. Tekin and O. Yağan, Cost-aware LLM-Based Online Dataset Annotation, Neural Information Processing Systems (NeurIPS 2025), Dec 2025. **Selected as a Spotlight Paper (13% of accepted papers).**
- I. Juneja, C. Joe-Wong, and O. Yağan, Pairwise Elimination with Instance-Dependent Guarantees for Bandits with Cost Subsidy, *The Thirteenth International Conference on Learning Representations (ICLR 2025)*, April 2025.
- O. İrsoy, O. Yağan, Analysis and Optimization of Robustness in Multiplex Flow Networks Against Cascading Failures, to appear in *IEEE Transactions on Network Science and Engineering*, August 2025.
- Y. Tian and O. Yağan, Correlated Social Contagions with Multiple Topics: A Generalized Linear Threshold Model, to appear in *IEEE Transactions on Networking*, 2025.

Cost-aware LLM-based Online Dataset Annotation

Abstract:

Recent advances in large language models (LLMs) have enabled automated dataset labeling with minimal human supervision. While majority voting across multiple LLMs can improve label reliability by mitigating individual model biases, it incurs high computational costs due to repeated querying. In this work, we propose a novel online framework, Cost-aware Majority Voting (CaMVo), for efficient and accurate LLM-based dataset annotation. CaMVo adaptively selects a subset of LLMs for each data instance based on contextual embeddings, balancing confidence and cost without requiring pre-training or ground-truth labels. Leveraging a LinUCB-based selection mechanism and a Bayesian estimator over confidence scores, CaMVo estimates a lower bound on labeling accuracy for each LLM and aggregates responses through weighted majority voting. Our empirical evaluation on the MMLU and IMDB Movie Review datasets demonstrates that CaMVo achieves comparable or superior accuracy to full majority voting while significantly reducing labeling costs. This establishes CaMVo as a practical and robust solution for cost-efficient annotation in dynamic labeling environments..

E. C. Elumar, C. Tekin and O. Yağan, **Cost-aware LLM-Based Online Dataset Annotation**, Neural Information Processing Systems (NeurIPS 2025), Dec 2025. **Selected as a Spotlight Paper (13% of accepted papers)**.

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Shaping Pathways for Future-Ready Learning: GEC Academy's 2025 Fall Product Launch Tour

GEC Academy welcomed the 2025 Fall season with a multi-city product launch tour across Shenzhen, Shanghai, Wuhan, and Chengdu, creating spaces for educators, students, and partners to gather around a shared conversation on future-ready learning. The tour unfolded as a series of moments reflecting GEC's evolving vision for education, one that moves beyond isolated programs to bring research skills, language assessment, global competencies, and innovation-focused learning into a coherent, multi-layered ecosystem. The 2025 Fall launch turned attention to the programs themselves—each designed to meet students where they are, while opening pathways toward where they hope to go.

- **LUMINAI Robocrafters Camp: Learning at the Frontier of AI and Robotics**

The LUMINAI Robocrafters Camp is a forward-looking STEM program developed with the academic support of the iCANX Global Science Platform and led by faculty from top research universities, including Tsinghua University. Designed for secondary school students, the program places artificial intelligence and robotics at its core, integrating intelligent creation, bio-inspired robotics, engineering challenges, and AI ethics into a hands-on, interdisciplinary learning experience.

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- **Oxford Test of English Advanced: A Smarter Measure of Academic English**

The Oxford Test of English Advanced is a computer-adaptive English proficiency assessment developed by Oxford University Press, certified by the University of Oxford, and aligned with the Common European Framework of Reference (CEFR) at the B2–C1 levels. Designed to reflect how English is used in academic and real-world contexts, the test evaluates listening, reading, speaking, and writing through an integrated, flexible format. Its adaptive design allows each candidate to receive a personalized assessment experience, producing accurate and reliable results within a shorter testing time.

GEC Academy serves as the first and currently the only officially authorized partner of Oxford University Press for the Oxford Test of English Advanced in mainland China. At the 2025 Fall launch, GEC Academy formally announced the rollout of the Oxford Test of English Advanced China examination operations and service plan, marking an important step in expanding access to a globally recognized English proficiency assessment for students across the region.

- **LASER: Building Research Skills for Academic Study**

The LASER Award in Research Skills for Academic Study is an officially certified research skills program recognized by the UK's Office of Qualifications and Examinations Regulation (Ofqual) and the Quality Assurance Agency for Higher Education (QAA). Designed to strengthen students' academic research and writing capabilities, the program provides structured training in research methodology, critical analysis, and academic communication. Through guided inquiry and small-group research projects, students will develop the skills required for independent study and formal academic writing, while aligning their preparation with current UCAS application expectations. Upon completion, the LASER Award may be converted into UCAS Tariff Points, offering both practical academic training and recognized outcomes that support university applications.

- **Global Skills Project (GSP): Project-Based Learning within the International GCSE Framework**

The GSP program is an official project-based learning program within the OxfordAQA International GCSE framework, developed and certified by OxfordAQA. Aligned with the Oxford International Curriculum, the GSP program introduces students at the GCSE stage to structured project-based learning grounded in internationally recognized assessment standards. Through research-driven projects, students will develop essential skills in critical thinking, collaboration, communication, and problem-solving, while learning to apply academic knowledge to real-world contexts.

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Beyond the programs unveiled during the tour, GEC also shared a wider landscape of learning possibilities, from academic competitions to winter study journeys that extend learning beyond the classroom. These initiatives reflect an ongoing commitment to meeting students where they are, while opening space for exploration, growth, and long-term development. The 2025 Fall launch will conclude with a flagship gathering in Beijing in January, bringing the conversation full circle as GEC Academy looks ahead—continuing to shape learning pathways that connect curiosity, capability, and a global future.

Take a look back at some of the highlights from the 2025 Fall Product Launch Tour.

AMAZING WORK FROM GEC STUDENTS

Each month, GEC will introduce some of our exceptional students' work in a specific research area to our audiences. This month we selected two articles from our previous students in the field of **Computer Science.**

Comparative Analysis of Hybrid A* and RRT* Algorithms and Optimizing the RRT* Algorithm in Autonomous Maze Navigation

The path planning problem of autonomous mobile robots is a very important problem in today's robotics field, and after decades of development, many path planning algorithms have been derived, among which the A* algorithm and the Rapidly Exploring Random Trees (RRT) algorithm are more widely used. These two methods use completely different basic principles; the A* algorithm relies on global search, while the RRT algorithm uses random search, in order to explore the advantages and disadvantages of the two algorithms, this paper mainly analyzes the principles of the A* algorithm and the RRT* algorithm and compares their performances in the maze navigation of robots...

Click **HERE** to read the full text!

Application of Artificial Intelligence in the Diagnosis of Neurodegenerative Diseases: The Case of Alzheimer's Disease

The primary research methodology of this paper is an extensive review of existing literature, focusing on the evolution, challenges, and future prospects of AI in the early diagnosis and prediction of AD. Research to date has demonstrated that various teams have proposed a multitude of models, each with its unique strengths, showcasing significant progress in the application of AI within this field. The findings reveal that while AI's application in the early diagnosis and prediction of AD has made commendable strides, the models employed still offer considerable room for improvement...

Click **HERE** to read the full text!

December 15, 2025

Join Us at ASI Global Technical Sponsorship Conferences: Open Calling for Committee Members & Speakers

We are thrilled to hear from our GEC faculty members, teaching fellows, teaching assistants (PhD holders), and scholars.

Since 2023, ASI Global has taken immense pride in its role as a technical sponsor for a diverse array of international academic conferences, with a vision entailing both promoting interdisciplinary cooperation and nurturing an inclusive, collaborative educational environment that extends its benefits beyond the scientific community to society at large. **Hence, we are enthusiastic about extending invitations to more of our esteemed GEC Faculty members and Teaching Fellows, encouraging your active involvement as committee members or innovative speakers and storytellers,** who are passionate about sharing innovative ideas with the brightest minds, providing enriching insights, offering innovative experiences, and sharing real-world examples, among other valuable contributions to ASI Global technical sponsorship conferences.

Upcoming Conferences

For December, we have 1 technical sponsorship conference covering data science, machine learning and beyond.

- December 26-28; Kuala Lumpur, Malaysia
- 2025 3rd International Conference on Data Analysis and Machine Learning(DAML2025)

WHAT PROGRAMS DOES GEC OFFER IN NOV & DEC SEMESTERS?

In November and December, GEC launches a total of **45 online research programs** in the areas of Finance, Economics, Computer Science, Electrical Engineering, Biomedical Engineering, Chemical Engineering, Psychology and so on, partners with Jiangxi University of Finance and Economics to develop students' global competence through the GEC Global Competence Development Course. In both months, GEC also provides **1 personalized program** for and sets up **9 customized lectures** for Fujian Medical University and Zhejiang University of Technology. We will continue to gather students, faculty, and staff for an unrivaled academic experience.

The tables below show detailed information about the programs:

GEC 2025 November Program List,
GEC 2025 December Program List,
Universities offering GEC Global Competence Courses in November 2025,
GEC Personalized Programs for Universities in November 2025,
GEC Customized Lectures for Universities in November 2025,
GEC Customized Lectures for Universities in December 2025

Please click **HERE** to find previous program/course offerings.

Newsletter Improvement Survey

We would love to hear your thoughts or feedback on how we can improve your experience with our newsletter.

For your convenience, please click **HERE** to fill out the survey link.

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publicity@gecacademy.com | asi@gecacademy.com
https://www.asi.gecacademy.com/