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INNOVERSE 3.0: Where Creativity Powers Innovation

Cover Story

UNIMY tech byte

This Month's Highlights

- From Curiosity to Cybersecurity
- Pursuing Bachelor's Degree in Finance or Fintech?
- Strengthening China–Malaysia Education Bridges Through Strategic Partnerships
- Post-Quantum Cryptography Readiness

A monthly e-Newsletter of the University Malaysia of Computer Science & Engineering

UNIMY tech byte

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e-Newsletter

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BAC education

UNIMY UNIVERSITY MALAYSIA OF COMPUTER SCIENCE & ENGINEERING

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From the Editor's Desk

Prof. Dr. Vikneswaran Nair
Editor / Deputy Vice Chancellor, UNIMY

Let me start the 2026 issue of *UNIMY Tech Byte* with Happy New Year. As we step into the year ahead, may it bring renewed energy, good health, and fresh opportunities to learn, innovate, and serve society through technology. Through *UNIMY Tech Byte*, our e-newsletter, we will continue sharing key highlights, innovations, and community achievements. So, stay connected, stay inspired, and let us keep building a future-ready UNIMY, together.

We kickoff the year with **UNIMY's INNOVORSE 3.0** which concluded on 22 January 2026 at Horizon Hall, Menara BAC, showcasing student-led innovation across Computing, Interactive Multimedia, Game Development, Cybersecurity, Engineering, and Robotics under the theme **"Where Creativity Powers Innovation."** Beyond the exhibition and project walkthroughs, the event featured an industry panel on **"Entrepreneurship in the Era of Emerging Technologies,"** offering students practical perspectives on problem-definition, product readiness, and execution.

Such events are important because they translate academic learning into demonstrable outcomes. They create a structured platform for students to validate ideas through live feedback, strengthen professional communication and pitching skills, and build industry awareness early, while reinforcing UNIMY's commitment to multidisciplinary, industry-relevant talent development.

This issue also highlights UNIMY's ecosystem-building across people, programmes and partnerships. This include staff recognition (AETDEW fellow), student cybersecurity development, FinTech pathways, an articulation route with Northumbria, partnership in Indonesia and China, industry linkages in cybersecurity, community connectivity and strengthening research/grant momentum at UNIMY.

We invite you to be part of future issues. Send articles of not more than **300 words**, together with selected **high-resolution images**, or opinion pieces supported by photos or diagrams from your classrooms, labs, industry projects, or community work to **Vikneswaran.N@unimy.edu.my**. Your stories will help show how UNIMY builds Malaysia's digital talent with purpose.

Thank you once again for your continued support, critique, and contributions. Let this newsletter remain your monthly checkpoint on what UNIMY is building, testing, and ready to share next.

INNOVERSE 3.0:
Where Creativity Powers Innovation

Ir. Syaiful Anas Suhaimi
Senior Lecturer, School of Engineering & Frontier Technology, UNIMY

INNOVERSE 3.0 successfully concluded on 22 January 2026 at Horizon Hall (Level 3A), Menara BAC, bringing together a vibrant showcase of student-led innovation from Computing, Interactive Multimedia, Game Development, Cybersecurity, Engineering, and Robotics. Guided by the theme "Where Creativity Powers Innovation," the event demonstrated how multidisciplinary thinking can translate into tangible solutions, compelling prototypes, and confident student pitching.

The day began with opening remarks by Prof Ts Dr Salwani Mohd Daud, Vice Chancellor of UNIMY, who welcomed guests and reaffirmed the university's commitment to producing graduates who can combine technical capability with creativity, purpose, and industry relevance. The exhibition that followed reflected this direction, with a steady flow of visitors engaging students in live demonstrations, discussions, and feedback sessions throughout the day.

A major strength of INNOVERSE 3.0 was the structure of the project walkthroughs, delivered across two presentation sessions. Students presented work spanning individual, group, and postgraduate categories, covering diverse themes such as applied computing, interactive experiences, digital content creation, game design, security thinking, engineering builds, and robotics concepts. The walkthrough format placed equal emphasis on *what was built* and *how it was communicated*, reinforcing the importance of clarity, logic, and usability alongside technical design.

In the afternoon, the event transitioned into an industry-focused segment aligned with the industrial talk, "Entrepreneurship in the Era of Emerging Technologies." The industry panel session featured **Mr. Kevinjit Singh, Product Manager at i-Sprint Innovation** and **Mr. Say Lim, CEO and Co-Founder of Square Cloud**

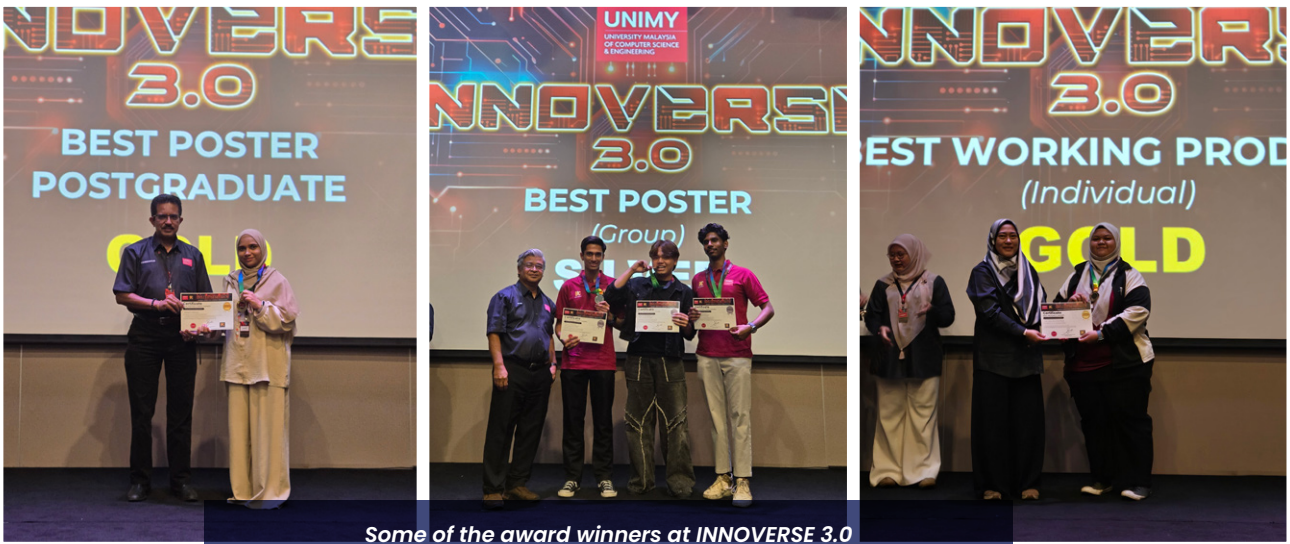
The panel provided grounded perspectives on current technology directions and industry needs, with consistent emphasis on product readiness, problem-definition, and the entrepreneurial mindset required to operate in fast-moving tech environments. Students gained practical insight into how innovations are evaluated beyond the classroom—particularly in terms of feasibility, value proposition, differentiation, and execution discipline.

Mr Say Lim and Mr Kevinjit Singh, delivering their talk

The event concluded with Awards & Recognition, celebrating excellence across key categories including Best Working Product, Best Poster, and Best Presentation. Beyond the awards, the closing segment highlighted a wider message that innovation is a process of iteration, testing, learning, and communication, supported by mentorship and strengthened through industry exposure.

Key outcomes from INNOVERSE 3.0: (1) Strong industry insight from expert panelists on emerging technologies and entrepreneurship; (2) Wide exposure to innovative student projects across multiple disciplines; and (3) High-quality networking and engagement between students and industry leaders.

UNIMY records its sincere appreciation to all students, supervisors, organisers, industry guests, and partners who contributed to INNOVERSE 3.0. The event not only showcased student capability but also reinforced the value of multidisciplinary collaboration, where creativity strengthens innovation, and innovation becomes meaningful when it connects to real needs.



Some of the award winners at INNOVERSE 3.0


3.0
ERE CREATIVITY POWERS INNO
22 January 2026 | 10 AM - 04 PM
HORIZON BANQUET HALL LEVEL 4, MENARA BAC
Final Year Project
Capstone


UNIMY
ENTREPRENEURSHIP IN THE ERA OF EMERGING TECHNOLOGIES
INNOVERSE
3.0
INNOVATION
Final Year Project
Postgraduate

Mr. Thillai Raj T. Ramanathan Elected AETDEW Fellow

Devakumar Robert William
Senior Executive

AETDEW
THE ACADEMY OF ENGINEERING AND TECHNOLOGY OF THE DEVELOPING WORLD

Huge congratulations to BAC Education Group's Chief Technology Officer and UNIMY Adjunct Professor, Mr. Thillai Raj T. Ramanathan, on being elected a Fellow of the Academy of Engineering and Technology of the Developing World (AETDEW).

AETDEW is an international organisation that works closely with UNESCO through its International Science, Technology and Innovation Centre for South–South Cooperation (ISTIC), bringing together engineering and technology leaders from developing nations to advance capacity building, innovation, and sustainable development aligned with the UN Sustainable Development Goals.

This recognition reflects Mr. Thillai's long-standing contributions to technology and education and further strengthens the global standing of BAC Education Group and UNIMY through a platform grounded in real-world impact and international collaboration. A proud moment for all of us.

From Curiosity to Cybersecurity: My Journey from Year 2 to Building 0day

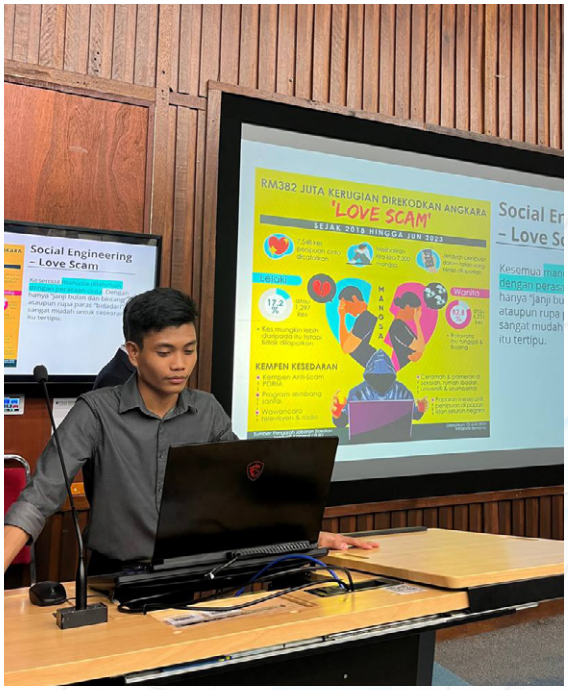
Mohamad Nur Iman

Alumni of Diploma on Information Technology (Cybersecurity), UNIMY

My interest in technology began at the age of eight (Year 2), when I owned my first computer. Around that time, my older brother introduced me to computer assembly and basic hardware troubleshooting. One memory still stands out clearly is when my PC suddenly showed a black screen, and I managed to fix it by removing the RAM, cleaning the dust off the contacts using an eraser, and reseating it. That small moment of "problem–solution–success" sparked a curiosity that would continue to grow over the years.

As I got older, my confidence in assembling and troubleshooting computers steadily improved. By the age of 13 (Form 1), I had unknowingly stepped into what we now call cybersecurity. Back then, terms such as ethical hacking, cybersecurity, red team, and blue team were not widely used in everyday conversations. Like many teenagers at the time, I framed my interest through familiar popular ideas of "hacking," "Anonymous," and related concepts, without fully understanding the professional discipline behind it.

I began learning through online resources, including YouTube, GitHub, and technical write-ups discovered through Google. At that stage, my knowledge was still limited. Looking back honestly, I would describe myself as a "script kiddie," relying heavily on copy-pasting tools and scripts created by others. One tool I used frequently was Termux, a mobile terminal application that became popular because it enabled experimentation without a laptop, but using just a smartphone. It was a very different environment compared to today's professional setups, where structured Linux environments, virtual machines, and formal Security Posture Assessments are standard practice.



Over time, I became more fluent with Linux and more disciplined in my learning. By 15, I started studying ethical hacking more seriously by enrolling in paid courses on platforms such as Udemy and spending time reading official documentation. At 16, I continued my technical

> *That small moment of 'problem–solution–success' sparked a curiosity that would continue to grow over the years.*

education at a vocational college, pursuing a certificate in computer systems and networking. During this period, I also became active in cybersecurity communities such as EliteGhost and contributed articles and discussion threads on platforms like dragonforce.io.

At 18, my focus shifted from learning to sharing. I began conducting free online sessions and teaching others what I had learned, driven by a genuine desire to contribute back to the community. By 19, together with a close friend, I launched my first business in a paid ethical hacking class. To our surprise, the programme attracted more than 200 participants. After it ended, opportunities followed, i.e. universities and corporate organisations invited us to deliver cybersecurity awareness talks and run training sessions for employees.

With my experience in UNIMY, together with a close friend, I launched my first business in a paid ethical hacking class. To our surprise, the programme attracted more than 200 participants. After it ended, opportunities followed, i.e. universities and corporate organisations invited us to deliver cybersecurity awareness talks and run training sessions for employees.

Most of these opportunities came through word of mouth. Past participants recommended us to colleagues, and that organic trust became a major driver of growth. As my confidence increased, I moved towards building something more structured. Towards the end of 2023, I founded 0day as a cybersecurity community, starting with short courses offered for free to test market interest. The response was encouraging with between 200 and 500 registrations per course, with 50 participants selected each time.

After running two free courses, I introduced paid programmes under 0day. The response exceeded expectations. Each class attracted more than 300 participants, generating approximately RM100,000 in total profit within a year. While that figure may seem modest to some, at my age it represents a meaningful milestone and I remain grateful for the continuous support and opportunities that made it possible.

More importantly, the value I gained went beyond financial returns. Through this journey, I built friendships, expanded my professional circle, and unlocked opportunities that continue to shape both my personal development and my future direction in cybersecurity.

Pursuing Bachelor's Degree in Finance or Fintech?

Mohammad Kamal Mohd Rathi
Associate Professor of Accounting & Finance, School of Business Technology (SOBT), UNIMY
Head of Center of FinTech & Islamic Finance (CFIF), UNIMY

Good question, and you are not alone. Many students are stuck to choose between Finance or FinTech, especially with AI that is changing everything.

Finance is safer, broader, works well if you aim for banking, accounting, audit, corporate finance, or policy roles. But many entry-level roles are being automated or consolidated. Traditional finance roles that are purely transactional are more exposed to automation.

FinTech is more specialised, faster-changing, better if you're comfortable with tech, logic, and continuous learning. FinTech does not replace finance, but it builds on it. Finance teaches you what money is. Fintech teaches you how money now moves.

FinTech is the future of finance but not in a "banks will disappear tomorrow" kind of way. Think of it more like how smartphones did not kill communication, they just made it smarter, faster, and slightly more addictive. It is an evolution, not a total replacement. Traditional finance is not dying but it is being forced to upgrade. Banks that ignore FinTech risk becoming like fax machines: technically still usable, but socially embarrassing!

Understanding FinTech

Skills (data literacy, systems thinking, digital risk, AI-assisted decision-making) remain relevant.

FinTech (Financial Technology) is the use of digital technologies to improve, automate, and transform financial services. This includes Mobile payments & e-wallets (GrabPay, Touch 'n Go, Apple Pay); Online banking & digital banks; AI-driven credit scoring and robo-advisors; Blockchain, cryptocurrency, and smart contracts; and RegTech (technology for compliance and risk management). Finance + Technology combination results in less paperwork, more speed, fewer headaches.

What to Expect if you Choose Fintech?

You must be comfortable with constant upskilling (AI tools, data, regulations change fast). Expect fewer "traditional" career ladders, more project-based or cross-functional roles. Internships, certifications, and hands-on projects matter more than CGPA alone.

Choose a FinTech programme that teaches finance fundamentals (not just apps); includes data, AI, cybersecurity, regulation; and gives hands-on exposure (projects, labs, industry tools). If you dislike tech, logic, data, or learning new tools, then do not force yourself into FinTech. If you enjoy problem-solving systems and are curious about how finance works behind the apps, FinTech is a good bet.

How is the FinTech Industry in Malaysia Like?

Malaysia's FinTech scene is alive and buzzing, and it is offering plenty of interesting career opportunities. On the ground, Malaysia is not merely observing global shifts in digital finance, but it is actively positioning itself to become a regional FinTech hub, leveraging its strategic ASEAN location and an increasingly strong entrepreneurial ecosystem. The landscape is also notably diverse, spanning payments and e-wallets, digital lending, remittances, insurtech, wealthtech, and a growing segment of Islamic FinTech. Importantly, this momentum is being reinforced by both government and industry bodies as part of the wider digital economy agenda, with regulatory sandboxes, talent development initiatives, and innovation incentives becoming more common and creating clearer pathways for skills, jobs, and new ventures.

FinTech Careers in Malaysia

FinTech careers in Malaysia are supported by a solid ecosystem that includes digital banks, e-wallets, regtech and payment platforms, Islamic FinTech, as well as adjacent growth areas such as cybersecurity and data/risk analytics. What the market tends to value most is the "hybrid" graduate, i.e. someone who can speak both finance and technology, rather than a pure coder with no finance literacy or a pure accounting/finance graduate with no digital capability. In practical terms, this translates into roles such as product analyst, risk and compliance (including regtech functions), data/AI roles within financial services, cybersecurity, digital payments operations, and innovation teams within banks. However, it is worth being clear-eyed that Malaysia does not reward a FinTech credential by itself, without demonstrable skills and real portfolio evidence, the degree alone will not carry someone very far.

If you are still exploring, starting with UNIMY's Diploma in FinTech is a sensible way to test the field first-build core finance-tech skills early, then decide whether to progress further with UNIMY's BBA in FinTech, without locking yourself in too soon.

UNIMY and Northumbria University Formalise New Articulation Pathway in Computing

Devakumar Robert William
Senior Executive

University Malaysia of Computer Science and Engineering (UNIMY) has entered into an articulation agreement with Northumbria University, Newcastle, UK, creating a clear progression route for UNIMY students to complete a UK honours degree.

Northumbria University NEWCASTLE

Under the agreement, UNIMY students who have successfully completed two years of either the Bachelor of Computer Science or the Bachelor of Software Engineering will be eligible to apply for advanced entry into Northumbria University's Computing (Top-Up) BSc (Hons). Successful applicants will enter at Level 6, subject to meeting the agreed advanced entry standard and the availability of places.

> *This collaboration supports UNIMY's commitment to expanding reputable international progression opportunities for students in computing disciplines*

To be considered for the pathway, applicants must achieve a minimum CGPA of 2.75. As part of Northumbria's standard admissions requirements, students must also meet English language proficiency expectations, including a minimum IELTS overall score of 6.0, with no component below 5.5. All applications will be made through Northumbria University's normal admissions procedures.

The recognition applies to September admissions for the following academic years: 2026/27, 2027/28, and 2028/29. Students who register for and successfully complete the Northumbria programme will receive the appropriate award, subject to the payment of applicable fees and the University's academic regulations.

This collaboration supports UNIMY's commitment to expanding reputable international progression opportunities for students in computing disciplines. For students, the pathway offers a structured route to completing a recognised UK honours qualification, while strengthening their exposure to international academic standards and employability expectations in the global digital economy.

Ergonomics Enhancement in Computer Laboratories through International Collaborative Research

Ts. Dr. Syahril Anuar Bin Idris
Head, Centre of Artificial Intelligence, Robotics & Automation (Caira)
Senior Lecturer, School of Engineering & Frontier Technology, UNIMY

The research project titled "*Ergonomics Enhancement in Computer Laboratory: Comparative Study of Body Posture of UNIMY and UDINUS Students Using RULA*" represents a strong commitment by the University Malaysia of Computer Science (UNIMY) and Universitas Dian Nuswantoro (UDINUS), Semarang, Indonesia, to advance ergonomic research and student well-being through international collaboration. The project was conducted over the period 13 October 2025 to 31 January 2026, with a key on-site research activity held on 6 January 2026 at UNIMY.

The team from UNIMY and UDINUS discussing the potential outcome of the project

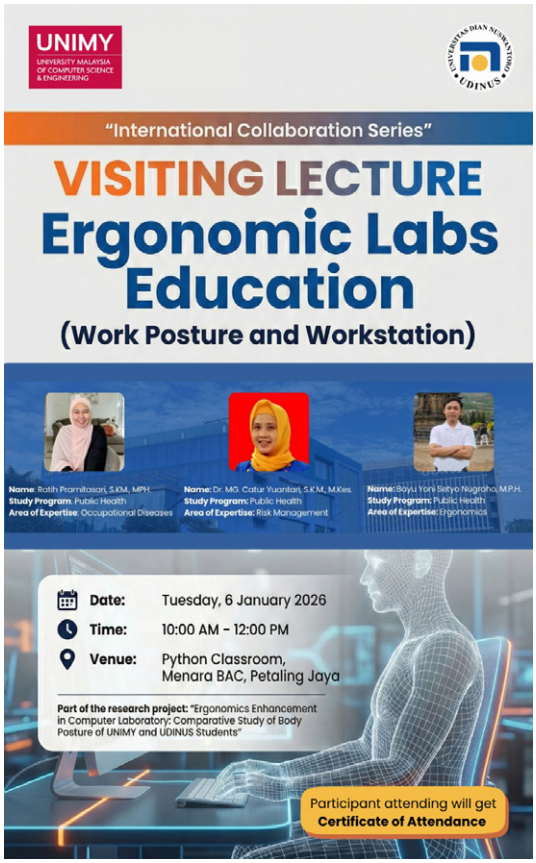
The primary objective of this study was the development of a Digital Ergonomic Assessment system using the RULA and REBA methods, enabling systematic and technology-driven evaluation of students' body posture in computer laboratory settings. In addition, the project aimed to increase students' awareness of the importance of ergonomics, provide technical recommendations for improving laboratory facilities, strengthen international cooperation between UNIMY and UDINUS, and generate collaborative international scientific publications.

Through hands-on experimental sessions and visiting lectures, students from both institutions gained direct exposure to ergonomic assessment techniques and practical research methodologies. This experiential learning approach not only enhanced their understanding of posture-related health risks but also emphasised the role of ergonomics in long-term academic performance and well-being.

The expected outcomes of the project include the successful development of a Digital Ergonomic Assessment tool based on RULA and REBA, the publication of a Scopus Q4-indexed research paper on the development and application of this system and sustained ergonomic education for students.

The programme concluded with a strategic discussion focusing on joint research publications targeting Scopus journals and the long-term sustainability of collaborative research through competitive grants. The UNIMY team was led by Ts. Dr. Syahril Anuar as Project Lead, with Dr. Lina Tio serving as International Liaison. Nik Luqman Nurhakim providing technical and laboratory support. Institutional guidance and strategic direction were provided by Prof. Dr. Vikneswaran Nair, Prof. Dr. Habibollah Bin Haron, and Ts. Raidah Binti Yazid, ensuring alignment with UNIMY's research and internationalisation objectives.

This project is fully supported by the UDINUS Internal Research Grant (Hibah Internal UDINUS) under the Lembaga Penelitian dan Pengabdian kepada Masyarakat (LPPM) Universitas Dian Nuswantoro, reflecting UDINUS's commitment to impactful and collaborative research at the international level



Strengthening China–Malaysia Education Bridges Through Strategic Partnerships

Dr. Lina Tio
Director of International Marketing, UNIMY

Gala dinner hosted by East Sea International and the Ningxia Jiqing Foundation

In January 2026, UNIMY, advanced three meaningful engagements that collectively reflect a clear direction in building trusted, long-term education pathways between China and Malaysia, anchored in mobility, skills, and sustainable collaboration.

The first milestone took place on 10 January 2026 at The Westin Hotel, where a gala dinner hosted by **East Sea International and the Ningxia Jiqing Foundation** brought together institutional partners, educators, and representatives from international schools and universities. More than a formal gathering, the evening served as a platform to reaffirm shared values, i.e. dependable assurance, responsibility, and long-term value creation. As a key collaboration and recruitment partner, East Sea International has, since 2022, strengthened cross-border connections through education fairs, engagement with stakeholders including EMGS, and expanded initiatives such as summer programmes and student mobility. The diversity of stakeholders present highlighted an important reality: contemporary education is no longer limited to classroom delivery, but increasingly shaped by ecosystems that support students to study, live, and grow across borders.

This momentum continued with a major institutional development on 12 January 2026, through the signing of a Memorandum of Understanding (MOU) between **Xiamen Huatian International Vocational College** and UNIMY. The MOU, formalised a shared commitment to programme pathways, staff development, and academic innovation. Discussions covered diploma-to-bachelor progression, postgraduate opportunities for academic staff, and industry-aligned short courses. A key strategic area explored was the potential development of a 5G Diploma Programme, building on UNIMY's existing strengths in technology and digital innovation. Both parties also discussed student and lecturer exchange, aimed at enhancing cross-cultural learning, curriculum enrichment, and joint teaching initiatives.

The third engagement involved the visit of **Henan Zhuli Higher Talent Training Centre** to the BAC Education Campus on 20 January 2026, where discussions were held with the leadership and institutional representatives to explore collaboration across UNIMY and Veritas University College, focusing on computer science and business programmes respectively. A practical model was explored whereby UNIMY and Veritas lecturers delivering selected subjects in China for one semester to strengthen academic continuity, prepare students for transition, and support quality assurance. The visit concluded with the signing of a Letter of Intent (LOI), signalling mutual commitment towards structured pathways, staff exchange, and student mobility.

MOU formalised remotely with Xiamen Huatian International Vocational College, China

Signing of a Letter of Intent (LOI) with Henan Zhuli Higher Talent Training Centre, China

Taken together, these three milestones show that when partners share trust, clarity of purpose, and a sense of responsibility, collaboration moves beyond formal events and signed documents into real opportunities for students. These engagements create structured pathways, strengthen mobility and staff development, and support programme innovation that responds to industry needs. UNIMY now looks ahead to converting these commitments into measurable outcomes that benefit students, partner institutions, and the wider China–Malaysia education ecosystem.

Strengthening Cybersecurity Education: Our New Partnership with Fortinet

Devakumar Robert William
Senior Executive

UNIMY is excited to announce a strategic partnership with Fortinet, Inc., a global leader in cybersecurity solutions serving over 920,000 customers worldwide. This collaboration marks a significant milestone in our commitment to delivering industry-relevant education for our students.

Through our Academic Partner Agreement with Fortinet, we have joined their prestigious Network Security Expert (NSE) Training Institute Certification Program, providing our students with access to world-class cybersecurity training at no cost.

Our students now have access to Fortinet's comprehensive certification pathway, spanning five proficiency levels across 11 different certifications. These credentials are recognized globally and highly valued by employers in the cybersecurity sector. The program includes self-paced online courses and complimentary exam vouchers upon course completion.

Students will gain hands-on experience with enterprise-grade security tools, developing practical skills that employers actively seek. As cybersecurity threats continue to evolve and demand for skilled professionals outpaces supply, partnerships like this ensure our graduates enter the workforce with credentials and competencies the industry needs.

We are grateful to Fortinet for investing in our students' futures and look forward to this collaboration.

UNIMY–Baycom Collaboration: Building Connectivity, Building Capability

Prof. Dr. Vikneswaran Nair
Editor / Deputy Vice Chancellor, UNIMY

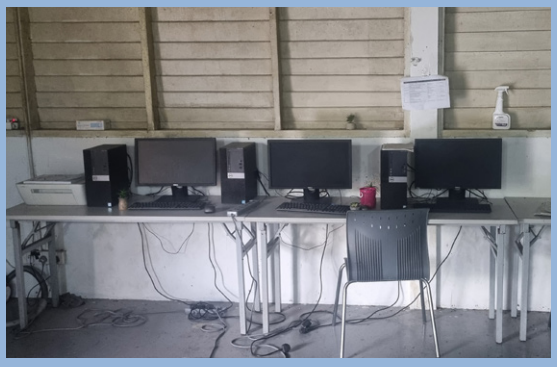
For 25 years, Baycom has worked from a simple conviction that access to connectivity should never depend on postcode. When communities are connected, education improves, livelihoods expand, and opportunity becomes tangible. Yet across rural Sabah, Sarawak, and parts of Peninsular Malaysia, the digital divide continues to shape who can learn, compete, and progress. For many students, online learning is not a choice, but it is simply out of reach.

In response, BAC Education Group through UNIMY together with Baycom, has launched the project, "*Every School Online*", a national initiative designed to deliver both access and outcomes. Baycom provides the enabling infrastructure in the form of reliable satellite-based connectivity, while UNIMY focuses on capacity building, equipping communities with practical digital skills that translate into improved livelihoods.

This partnership is intentional in its division of roles. Connectivity alone does not close gaps. Skills, confidence, and sustained support do. UNIMY's contribution centres on digital literacy, foundational STEM exposure, and employability-oriented training for students, youth, and adults. The aim is to ensure that once communities are online, they are also prepared to use digital tools productively for learning, work, and enterprise.

The impact is immediate and measurable.

- For students, *Every School Online* opens access to learning platforms, virtual instruction, and the same digital pathways available to their urban peers.
- For communities, it enables upskilling without displacement, supporting income diversification and resilience while people remain rooted in their local contexts.
- For Malaysia, it strengthens local talent pipelines, reduces pressure on urban migration, and supports a more inclusive digital economy.



This is not a hardware project. It is a human capital intervention. By pairing infrastructure with training, the initiative converts latent potential into visible capability. Delivery is grounded in accountability, where Baycom brings execution experience in last-mile connectivity, BAC Education Group contributes scale and educational strength, and UNIMY ensures academic rigour, monitoring, and impact tracking. Outcomes are defined, reported, and improved over time.

The initiative progressed through on-the-ground fieldwork conducted jointly by Baycom and BAC Education Group via UNIMY, with recce visits to two Orang Asli villages on 16 January 2026 at **Kg Orang Asli Serendah (Temuan community)** and on 23 January 2026 at **Kg Orang Asli Changkat Bintang (Semai community)**. The fieldwork was led by Baycom's Azwan Pakhalan and Sharifah Farhana, UNIMY's Prof. Dr. Vikneswaran Nair and Associate Professor Dr. Azlinah Lazam, and BAC Education Group's Dr. Selvamalar, enabling a grounded assessment of connectivity needs and community capacity requirements to ensure targeted, accountable delivery.

Every School Online now calls for collective leadership. The partners are in place. The model is tested. What remains is broader participation to extend reach and accelerate impact. Supporting this initiative is an investment in a more unified Malaysia, one where geography does not determine access, and where digital inclusion underpins social mobility, economic growth, and national cohesion.

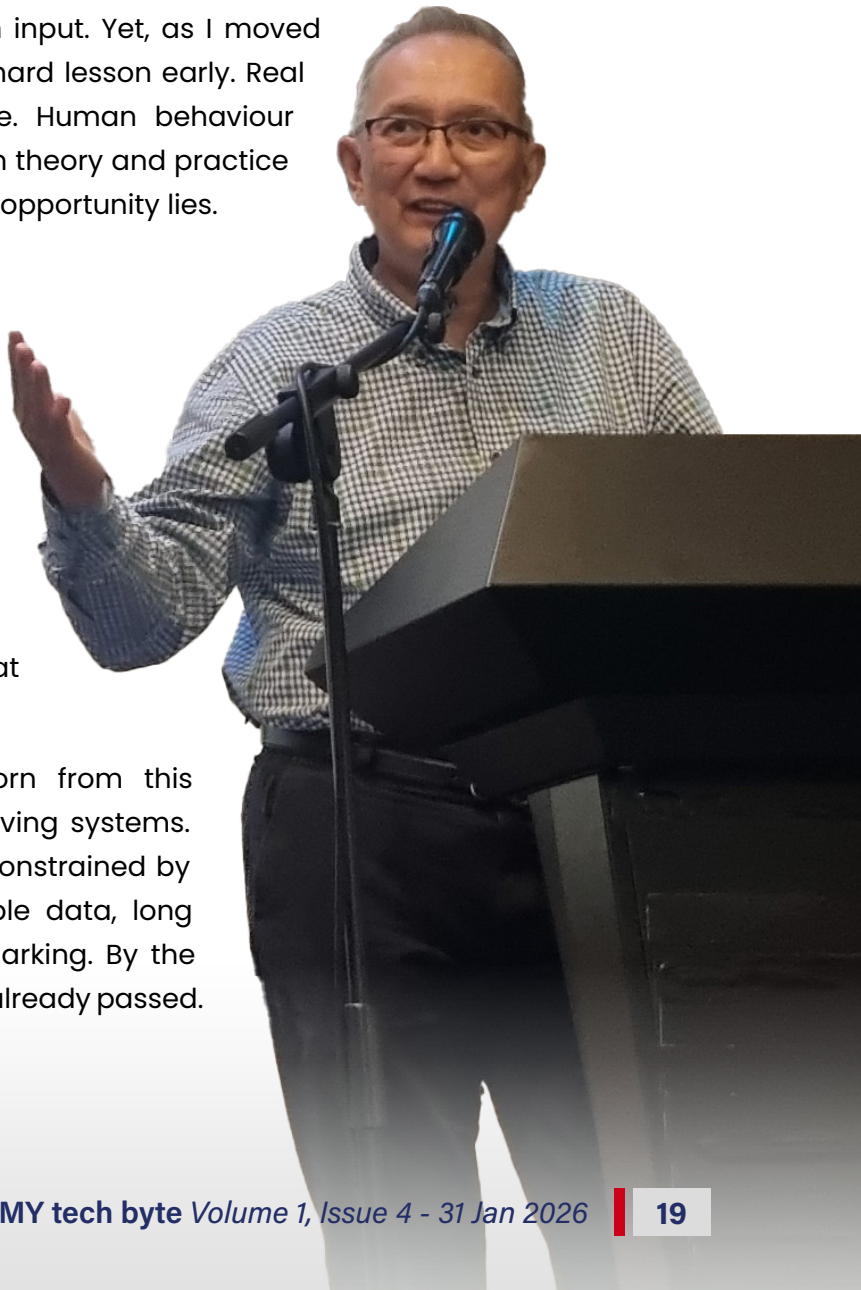
No school should be left offline. No child should be left behind. **Help put every Malaysian child online !**

Entrepreneurship in the Era of Emerging Technologies: From Optimisation Logic to Living Systems

Say Lim
Co-Founder & Chief Executive Officer, SquareCloud (Malaysia) Sdn. Bhd.

My journey into entrepreneurship did not begin with a start-up pitch or a business plan. It began decades ago with a question that still drives me today on how do we design systems that work better in the real world, not just on paper?

In the early 1980s, my academic training was grounded in applied mathematics, computing, and industrial engineering. Linear programming, system simulations, and optimization logic were the tools of the time. The objective was clear which was to achieve maximum output with minimum input. Yet, as I moved from university into industry, I learned a hard lesson early. Real systems are messy. Data is incomplete. Human behaviour disrupts perfect models. The gap between theory and practice is where most efficiency is lost and where opportunity lies.



My early career in capacity planning and operations reinforced this reality. By focusing on workflow analysis, bottlenecks, and labour productivity, I saw first-hand how small changes could compress processes that once took a week into less than a day. This was not about technology for its own sake; it was about mindset. Efficiency is a habit. You question assumptions, measure what matters, and continuously improve.

The idea behind SquareCloud was born from this experience. Buildings, like factories, are living systems. Yet for years, building optimization was constrained by three persistent problems: lack of reliable data, long installation cycles, and delayed benchmarking. By the time insights arrived, the opportunity had already passed.

Our pivot was simple but decisive. We partnered with MIMOS in 2019 to deploy wireless sensors and gateways, enabling rapid data capture and real-time visibility. What once took three to six months could now be deployed in under two. This shift transformed optimization from a retrospective exercise into an immediate, actionable process, driven by Industrial Revolution 4.0 technologies.

At SquareCloud, our mission is to help businesses move toward carbon neutrality by turning complex energy data into intelligence they can act on. Our vision is equally pragmatic which is to empower the global building industry to reduce energy consumption using AI, automation, and connected systems, not tomorrow, but now.

Our solution framework reflects this journey. We start with the digital foundation which includes sensors, meters, and connectivity. We progress to automated chiller plant management, predictive diagnostics, and AI-driven optimisation. At the peak sits GreenBOS, our all-in-one ESG dashboard, providing transparent, real-time tracking of carbon performance and compliance pathways toward net zero. Each phase builds on the last. There are no shortcuts.

Entrepreneurship, in my experience, is not about chasing perfection. It is about making the imperfect work, then improving it relentlessly. The leap from theory to entrepreneurship requires more than technical mastery. It demands communication, trust, and the ability to bring others along with a shared vision. A good idea only becomes real when people believe in it enough to act.

If there is one lesson I leave with today's innovators, it is this, mastery now requires both logic and machine intelligence. Do not choose between them. Find a system that truly matters, define what "better" looks like, and build backward with patience and precision. Do not just simulate the future. Design it, and deploy it where it counts.

Post-Quantum Cryptography Readiness: Moving from Awareness to Action

Kevinjit Singh
Product Manager, i-Sprint Innovations

Quantum computing is moving from theory to a practical risk that organisations must plan for. Classical computers process information using bits that take a definite value of 0 or 1 and solve problems through sequential logic and parallel processing, which makes them highly efficient for most enterprise workloads. Quantum computers use qubits that can exist in combinations of states through superposition and can be correlated through entanglement, enabling certain classes of problems to be explored in fundamentally different ways and, for specific tasks such as breaking some forms of public-key cryptography, potentially far faster than classical machines.

The central issue is that a future cryptographically relevant quantum computer can break today's public-key cryptography, undermining the confidentiality of encrypted data and the integrity of digital signatures. In effect, encrypted information harvested today may become readable later, and signatures that organisations rely on for trust and non-repudiation may be forged. The exposure is highest for systems that handle long-term sensitive data and for critical infrastructure sectors such as finance, energy, healthcare, and government, including PKI and code-signing environments.

Policy signals are also sharpening. We are shifting from advisory guidance to enforceable deadlines, supported by the finalisation of NIST post-quantum cryptography standards in 2024, which provides a stable foundation for mandates. The United States is setting an aggressive pace, including requirements for federal agencies to produce inventories and migration plans, creating a ripple effect globally. Within Asia-Pacific, national strategies are being formulated and implemented. In Malaysia, Bank Negara Malaysia's updated Risk Management in Technology that took effect from November 2025 explicitly expects financial institutions to plan early for emerging threats such as quantum computing and quantum resilience.

The operational challenge is a compliance–migration gap. Regulatory timelines may be shorter than the time required for a complex cryptographic migration. Inventorying systems can take months, while testing and integration can take years, making a "wait-and-see" posture the riskiest option. Closing this gap requires immediate visibility of cryptographic exposure and a structured migration pathway.

However, visibility is precisely where many organisations struggle. The "iceberg" problem is that cryptography is often embedded beyond the code an organisation writes, including third-party libraries, compiled binaries, legacy applications, and runtime network calls. Manual spreadsheets and basic scanners frequently miss this "shadow cryptography", and the scale of modern application dependency stacks makes manual audits impractical.

This is where i-Sprint's Qubit Safe Discovery module is positioned as an "X-ray" across the IT estate. It performs comprehensive scanning across source code, configuration files, and network traffic, generating a real-time Cryptography Bill of Materials. A key differentiator is binary and runtime scanning using advanced reverse engineering to identify vulnerable algorithms hardcoded inside purchased software, strengthening supply-chain visibility when source code is unavailable.

From discovery, organisations need a disciplined cycle to progress from insight to remediation. The Qubit Safe Cycle provides a four-phase roadmap: Inventory, Assess and Recommend, Implement including hybrid PQC, and Monitor, with discovery as the foundation for all subsequent phases. Outputs are aligned with governance and audit expectations through standardised export in CycloneDX 1.6, a Quantum-Adjusted Risk Score that ranks findings using algorithm strength, data sensitivity, and the Mosca Timeline, and audit-ready reporting mapped to the CSA Quantum Readiness Index.

Finally, capability development matters. i-Sprint's collaboration with UNIMY supports translation, productisation, and commercialisation of PQC tools, linking research outcomes and work packages to deployable solutions.

Strengthening UNIMY's Research and Grant Momentum

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UNIMY's research direction, through the Research, Innovation and Commercialisation Ecosystem (RICE) is anchored on building a coherent ecosystem that links research excellence with innovation and commercialisation, ensuring projects are designed with clear outcomes and measurable impact. The emphasis is on strengthening governance and capability for competitive grant acquisition, while prioritising strategic collaborations with national agencies and international partners to expand research capacity and relevance. In parallel, UNIMY is positioning flagship research projects as focal points to generate multidisciplinary outputs, translate findings into solutions for society and industry, and accelerate pathways from research to adoption.

UNIMY is advancing its flagship research projects through a deliberate funding pipeline, starting with URGS to seed and mature ideas, and scaling into national schemes such as FRGS, Dana Sosial KPT and PQRD in partnership with Agensi Nuklear, while strengthening international collaboration with UDINUS. Collectively, these efforts underscore RICE's role in reinforcing research governance, improving grant competitiveness, and translating research outcomes into tangible societal and industry impact.

UNIMY's research focus is also oriented towards multidisciplinary, problem-led work that supports national priorities and industry needs, with clear pathways from discovery to application. This includes building strong research teams, strengthening postgraduate and staff research capacity, and prioritising outputs that matter, especially in high-quality publications, prototypes, IP and commercialisation potential, policy-relevant evidence, and scalable solutions that can be adopted by partners and communities.

Current Research Projects at UNIMY