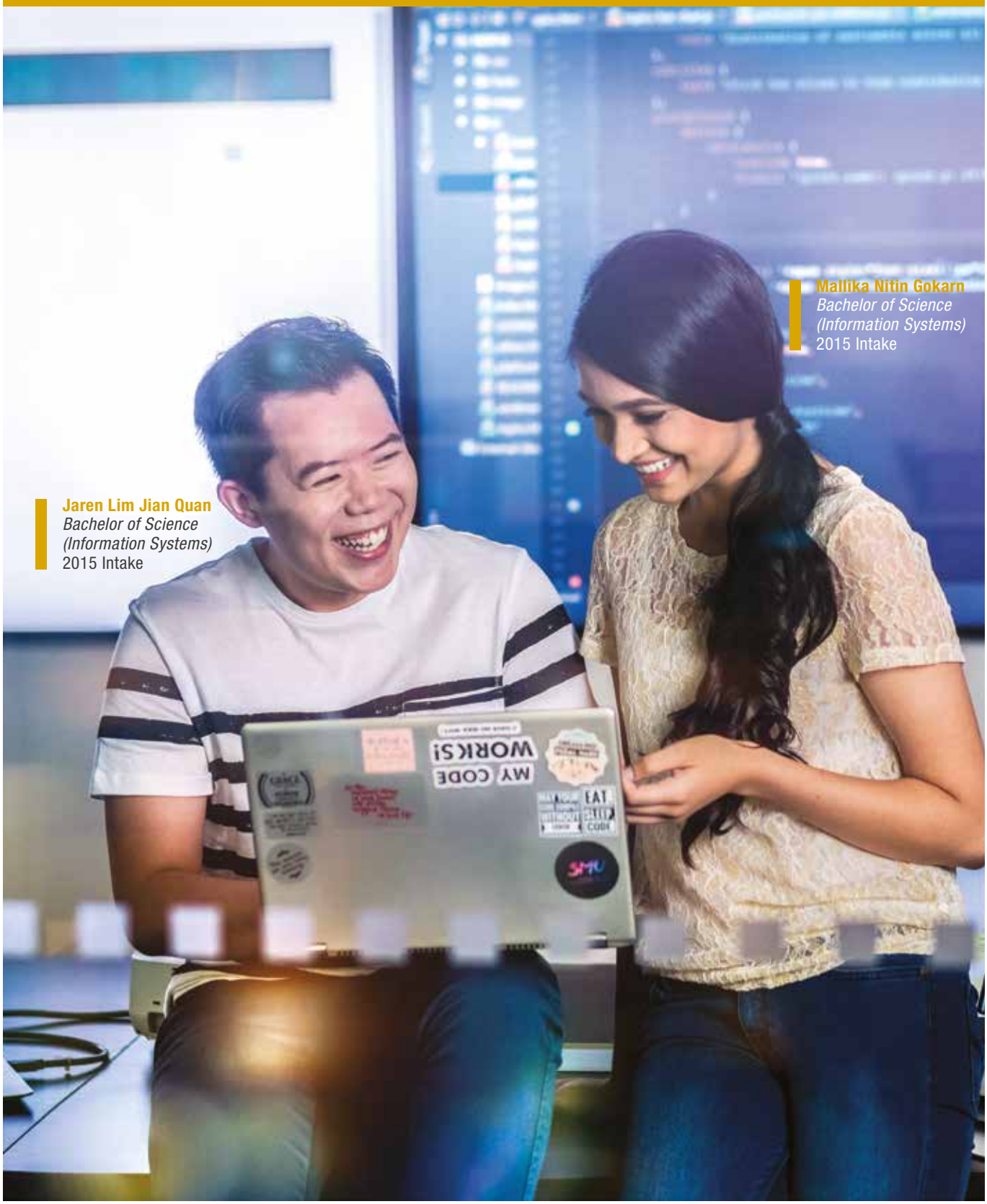
SMU
SINGAPORE MANAGEMENT UNIVERSITY
A Different U

Creating Value for Business and Society Through Innovative IT Solutioning.

SCHOOL OF INFORMATION SYSTEMS



Mallika Nitin Gokarn
Bachelor of Science (Information Systems)
2015 Intake

Jaren Lim Jian Quan
Bachelor of Science (Information Systems)
2015 Intake

DEAN'S ADDRESS

"As the IT school of Singapore Management University (SMU), the School of Information Systems (SIS) seeks to create knowledge in computing for the future of business and society. We aim for excellence in fundamental contribution to academic knowledge, as well as in creating technology with practical impact. SIS faculty includes several world-class scholars and rising stars in their respective disciplines. Our research portfolio is well aligned with Singapore's national initiatives like Smart Nation, Cybersecurity and Urban Management, and includes a number of well-funded projects in our focus areas.

We also seek to apply our knowledge in training IT professionals in creating innovative solutions that give value to business and society. SIS offers a suite of exciting education programmes. Our Bachelor of Science in Information Systems enjoys a strong reputation of producing job-ready professionals who are versatile in employing information technology to address business needs. I am confident that you will find the programme exciting, as students and employers do."

Prof. Pang Hwee Hwa
Dean, School of Information Systems

Smart Nation Immersion

SIS is at the centre of national initiatives like Smart Nation; Analytics for Business, Consumer & Social Insights; Cybersecurity & Data Privacy; Urban Management & Sustainability; Ageing-in-Place; and Financial Services Technology (FinTech). As such, our students gain from our close linkages with national agencies and leading industry players. They are afforded opportunities as interns, researchers and employees.

World-Class Faculty, Large Scale Research

Large R&D grants from industry and government provide many opportunities for our students to create and explore the future.

Future Ready Career Skills

Our graduates are highly sought after as they have strong technology, business and people skills.

Highly Collaborative Learning Culture

Our nurturing culture of 'learning-to-learn' has resulted in a strong sense of family and community within the School of Information Systems.

Fast-Track Programmes

Fast-track programmes allow undergraduates to pursue an SIS Bachelor's and integrated Master's degree within a shorter period of time.

Employer Testimonial

SMU SIS students possess the 3Cs - Confidence, Curiosity and Creativity. They display the ability to analyse a problem and develop workable solutions. SIS students also have a good balance of Technical and Business skills and the ability to apply their knowledge in a new environment.

Michelle Chan
Director, Human Resources
DFS Group Limited

Featured Student Testimonial

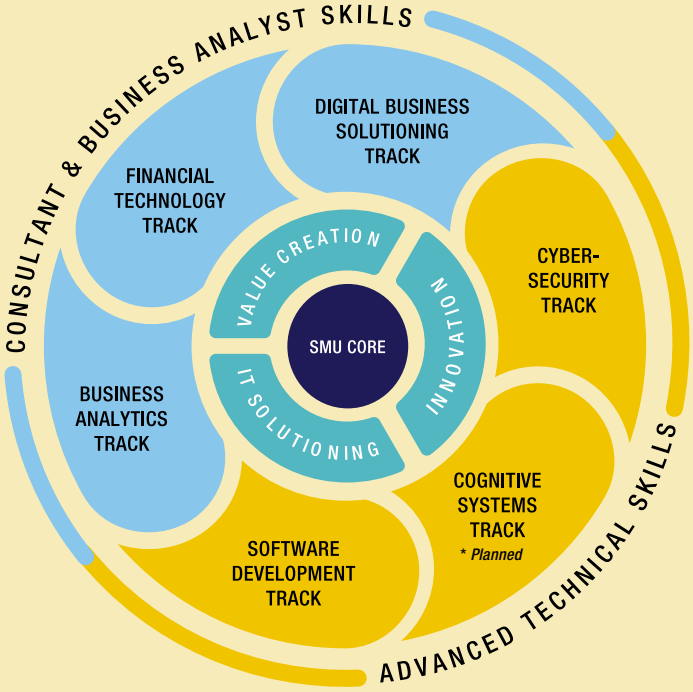
I was able to apply my problem-solving and learning-to-learn skill-sets that I gained through SMU SIS courses that focus on the paradigm of people, processes and technology, to my Overseas Community Service Project (OCSP). My OCSP team members and I planned, organised, and crafted a syllabus that taught problem-solving skills to students in Tacloban, Philippines. We shared the various approaches to problem solving through the use of personal skills, improving processes and being enabled by technology, to the Tacloban locals and in turn, gleaned life-changing lessons on resilience and tenacity from them. These experiences has compelled me to pass it forward, contributing my best capacities in service to SMU SIS and society.

Jaren Lim Jian Quan
Programmes Co-Director,
Project Tacloban OCSP
2015 Intake

NURTURING PROFESSIONALS FOR THE DIGITAL AGE

BSc (Information Systems): Information Systems

The emergence of new and disruptive computing and information technologies, in tandem with the massive amounts of data spawned as a result of technological systems and applications, has raised the demand for a workforce skilled in Information Systems. Future graduates have to be equipped with new capabilities in order to harness this evolution, thereby developing innovative and value-adding solutions for businesses and society.



The core curriculum for our IS Major focuses on the following:

Value Creation
Identifying opportunities to create value for businesses and society.

Innovation
Innovating by exploiting possibilities offered by emerging technologies and market trends, while synthesising knowledge across domains.

IT Solutioning
Building applications through harnessing computing and information technologies.

Tracks focusing on deepening Consultant & Business Analyst Skills

Business Analytics
This track teaches students the concepts, methods and best practices of data analytics, and enables them to apply that knowledge to develop business strategies and solve real-world issues.

Financial Technology
Covering the foundations of enterprise architecture in banking, as well as functional domain areas, such as retail and corporate banking, digital payments and innovations, and financial markets.

Digital Business Solutioning
This track enables students to ideate, design and develop IT solutions that leverage on digital technology to solve business problems and enhance operational productivity.

Tracks focusing on deepening Advanced Technical Skills

Software Development
Building on basic computational literacy, students will be equipped with the technical skills to develop applications, from web to mobile that fully leverage and enhance technology effectively.

Cybersecurity
Delivering both a solid theory and practical foundation, the courses in this track provide a full-spectrum coverage of various aspects of security fundamentals, including (but not limited to) network security, data security and software security.

Cognitive Systems - **Planned*
The Cognitive Systems Track covers an area in which technology can be applied to human problem-solving and mental task processes, so as to augment or substitute human capabilities. Cognitive systems can be applied to a wide variety of domains, from intuitive user interfaces to game AI developments.

Curriculum for Academic Year 2017-18 — Information Systems Major

The curriculum for our IS Major includes core foundation skills, with the flexibility to acquire deep technical and/or business skills based on individual career goals. This is further supplemented by broad-based multi-disciplinary courses that futureproof graduates with problem-solving capabilities, leadership training and situational adaptability.

Career Ready Tech/ Business Skills

- **Information Systems Major**
  - **Track** — 4 Courses
  - **IS Electives** — 2 Courses
- **Quantitative Thinking + Other Electives** — 5 Courses

Students can acquire either deep technical skills or a healthy balance of technical and business skills based on their aspirations or career goals.

Information Systems (IS) Foundation Skills

- **Information Systems Core*** — 10 Courses
- **Information Systems Project Experience** — 1 Course

Information Systems Core emphasises the critical thinking and technological skills to create IS systems for business solutions.

Futureproof Skills

- **SMU Core (SMU Broad-based Courses)** — 14 Courses
- **Internship** — Minimum 10 Consecutive Weeks
- **Community Service** — Minimum 80 Hours

SMU Core equips students beyond the depths of the IS discipline; with analytical thinking and problem solving skills, as well as 'soft' people skills.

Total — **36 Courses**

+Information Systems Core Courses

- Information Systems & Innovation
- Data Management
- Enterprise Solution Development
- Introduction to Programming
- Business Process Analysis & Solutioning
- Enterprise Solution Management
- Computational Thinking
- Interaction Design & Prototyping
- Information Systems Project Experience
- Web Application Design & Development
- Software Project Management

A NEW MAJOR FOR A NEW AGE

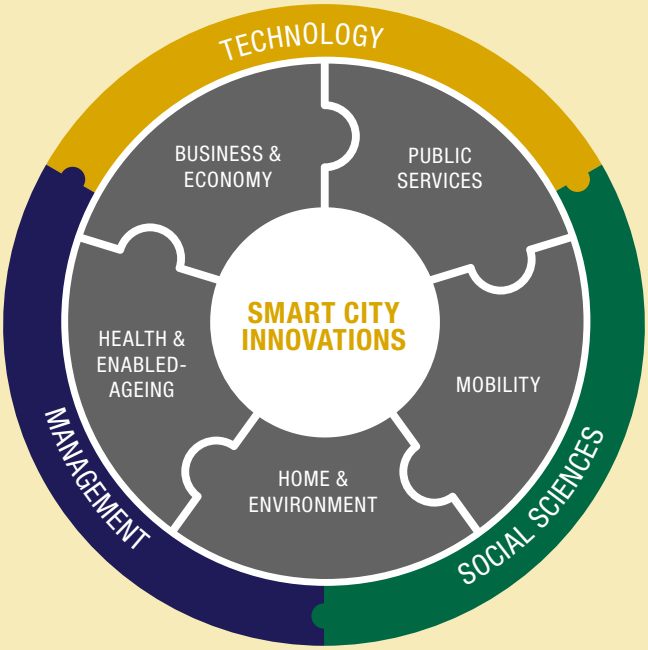
BSc (Information Systems): Smart-City Management & Technology

Smart cities are emerging across the world, requiring not just technology, but the ability to synthesise solutions considering multiple dimensions across social, economic, business and environment. A smart city, empowered by technology, connects people, businesses and government to make itself more liveable and sustainable. And in order to succeed, it is essential for the next generation of professionals to be equipped with multidisciplinary skills.

Smart-City Management & Technology Major is a unique interdisciplinary programme aimed at developing the skills for the future, aligning with global and national initiatives towards smart cities. It equips students with analytical, interdisciplinary critical thinking and technological skills to seize career opportunities in designing, developing and managing smart city innovative solutions for the urbanisation challenges of today's global economy.

This major equips students with interdisciplinary skills across Technology, Social Sciences and Management disciplines. The students will also gain depth in domain knowledge through career-ready specialisation in 5 key smart city applications domains:

- Business & Economy
- Health & Enabled-Ageing
- Home & Environment
- Mobility
- Public Services



Technology Discipline

- Analytics
- Mobile
- Internet-of-Things
- Cloud Computing
- Secure Data & Privacy
- Emerging Technologies

Social Sciences Discipline

- Health & Well-being
- Community
- Equitable Society

Management Discipline

- Sustainable Cities
- Policy & Decisions
- Cost-Benefit-Risk Management
- Impact on Civil, Private & Government

Curriculum for Academic Year 2017-18 — Smart-City Management & Technology Major

The Bachelor of Science (Information Systems): Smart-City Management & Technology curriculum is as follows:

Career Ready Specialisations	**Technology/ Social Sciences/ Management Specialisations** Minimum 4 Courses	**IS Electives** 5 Courses	**Quantitative Thinking** 2 Courses
Smart-City Core Skills	**Smart-City Interdisciplinary Core^** 10 Courses		
	Smart-City Project Experience 1 Course		
Futureproof Skills	**SMU Core (SMU Broad-based Courses)** 14 Courses		
	Smart-City Internship Minimum 10 Consecutive Weeks	**Community Service** Minimum 80 Hours	
Total	**36 Courses**		

Students are strongly encouraged to specialise in a selected domain by completing a second major in Technology, Social Sciences or Management.

Smart-City Core builds analytical skills, interdisciplinary critical thinking and technological skills to create innovative smart city solutions.

SMU Core develops students holistically; equips students with analytical thinking, as well as problem solving and soft skills.

^Smart-City Interdisciplinary Core Courses

Analytics Foundation ●	Data Management ●	Introduction to Solution Development ●
Security Management & Data Privacy ● ●	Social Analytics for Smart Living ● ●	Introduction to Public Policy ● ●
Sustainable Cities ● ●	Information Systems & Innovation in Smart Cities ● ● ●	Geospatial Analytics for City Planning ● ● ●
Smart City Systems & Management ● ● ●	Smart City Project Experience ● ● ●	

● Technology ● Social Sciences ● Management

LEADING THE WAY IN RESEARCH

Funded by Singapore's National Research Foundation, Living Analytics Research Centre (LARC) actively works on four smart nation application project domains, namely (a) urban and social liveability, (b) jobs and skills intelligence, (c) personalised urban mobility, and (d) smart consumption and healthy lifestyle. The overall research goal of LARC is to create smart nation solutions based on data driven insights, intelligent recognition of social and urban context, automatically constructed rich urban knowledge bases, and personalised user engagement.

Jobsense Project

Jobsense is a project to help university students and alumni develop their career with analytics generated insights about jobs and skills. These insights are automatically discovered from job market data using the data analytics technologies developed by LARC of SMU SIS. Jobsense also provides personalised guidance in job search and skills training to maximise users' potential in the job market.

SMU-TCS iCity Lab is a joint initiative between Singapore Management University (SMU) and Tata Consultancy Services (TCS), a leader in the global marketplace and among the top 10 technology firms in the world. The partnership combines TCS' industry leading IT services expertise and culture of innovation with SMU's globally recognised excellence in research and education in social sciences, management, analytics and computing in partnership with both the public and private sectors.

Both SMU and TCS are known for their ability to integrate IT with business in ways that create innovative IT solutions that meet public and private sector management needs. The SMU-TCS iCity Lab is working together with selected partnering cities in China, India and other rapidly developing ASEAN countries to create urban management solutions.

SHINESeniors Project

The SHINESeniors (Smart Homes and Intelligent Neighbours to Enable Seniors) Project is an iCity Lab-initiated effort to make community care services effective through innovations in care delivery by leveraging on Information and Communications Technology (ICT). Sensor-enabled homes will be developed in support of ageing-in-place for senior citizens living in Singapore. Through SHINESeniors, it is hoped that the cost of care delivery will be lowered significantly given the lower reliance on manpower. The SMU-TCS iCity Lab is working with multiple stakeholders, including several government agencies and community partners, to implement the project over three years.

SECURE MOBILE CENTRE

Funded by Singapore's National Research Foundation (NRF), the Secure Mobile Centre (SMC) investigates efficient and scalable solutions that strengthen the security of mobile computing systems, applications and services. SMC partners with leading infocomm firms such as ST Electronics (Info-Security) Pte Ltd, Gemalto Pte Ltd, StarHub, and McAfee Singapore which is part of Intel Security, to conduct its R&D projects. The centre also collaborates with Singapore government agencies such as the Info-communications Media Development Authority of Singapore (IMDA), the Defence Science and Technology Agency (DSTA), and the Monetary Authority of Singapore (MAS).

FaceLive Project

While existing face authentication systems are vulnerable to Media-based Facial Forgery (MFF) attacks (in which adversaries use victims photos/videos to circumvent face authentication), FaceLive detects the MFF-based attacks by measuring the consistency between device movement from the inertial sensors and the head pose change from the facial video captured by a built-in camera.

UNiCEN FUJITSU

Fujiitsu-SMU Urban Computing & Engineering (UNiCEN) is a synergistic industry-university partnership jointly funded by Fujitsu Limited and the National Research Foundation under the Corp Lab @ University Scheme established in October 2014.

UNiCEN conducts industry-relevant R&D on combining models and algorithms from artificial intelligence, behavioural economics, operations research and high-performance computing approaches to create intelligent systems to address local urban challenges and conduct real-world test-bedding in Singapore.

Dynamic Mobility Management – Maximising the Potential of Taxis

This Urban Mobility project aims to empower transport service providers to deliver higher quality of service through the use of intelligent information systems. A series of innovative software tools and applications are developed for drivers and fleet operators to make decisions that will dynamically balance taxi demand and supply to improve customer service level and driver income level; and to address last mile services and massive crowd dispersion. This in turn contributes towards easing congestion and achieving a car-lite society in urban cities. UNiCEN is working with government agencies and transport providers to implement the system over the next year.

TESTIMONIALS

Working in the Mobile Threat Team (MTT) of Appthority, a mobile security start-up, I am responsible for detecting ransomware, incident response and thought leadership research. My previous report about Apple's App Transport Security (ATS) has been mentioned by CIO, PC World, Computer World, MAC World, Security Week and Yahoo News. I was also interviewed by BBC about mobile security and hacking.

I obtained both of my BSc and PhD degrees from SMU SIS, which have **honed my skills in every aspect:communication, leadership, creative thinking and group work.**

Su Mon Kywe
Research Scientist,
Appthority (USA)
Class of 2011

The school's **emphasis on learning-to-learn and effective communication** empowered me in my role as a data scientist; where I constantly need to learn, unlearn, relearn new knowledge and work with both business and technical stakeholders.

No school can prepare students for all the challenges in one's chosen profession, especially in a fast-changing field like IT. What SIS provides is a foundation for us to build on and the network of friends to support us through school and beyond.

Thia Kai Xin
Data Scientist,
Lazada
Class of 2012

After visiting all the different universities, I was enticed by the seminar style lessons in SIS. The school also offered modules that were not restricted to IT, but included modules with Business elements, which I felt would be a value-added experience. Furthermore, we had a nurturing faculty who always went the extra mile to guide us and provide us with useful advice, in our studies and in life.

SIS also positions its students well and this is evident when I was applying for my job. My potential employers also echoed this. All I have learnt in SIS is being put to good use. **SMU SIS trains you to be adaptive, resilient and a team player, skills which are highly important in workplaces.** I hope that you will get to enjoy these similar experiences when you join SIS!

Keith Tan
Software Engineer, Government Technology Agency of Singapore (GovTech)
Class of 2016

My main job in a regional sales role is to drive opportunities and identify organisations which have various Cybersecurity needs. To get to this stage, I had to go through various roles to understand the different functions in the organisation. Strictly speaking, this is my 4th role in 2 years. Initially, the role change is a lot of hassle, but over time I realised being adaptable is what differentiates me. The changes have also been a build-up to prepare me for my current role.

Today, technology is the drive but business holds the demand. Even the best technology in the world will go unused if it is not effectively presented, marketed and sold to non-tech savvy decision-makers. **Communicating business value, presentations, and gathering project requirements are all crucial non-technical skills that SIS has instilled in me,** and have helped me to succeed.

Sherrie Tan
Channel Specialist,
APJ Sales Symantec
Class of 2014

The learning culture in SMU SIS allows students to understand theories and apply them in real-world projects. The BSc (IS) curriculum offers breadth of both technology and business acumen, and develops in students the ability to learn independently, as well as being adaptive in a team-based environment. I strongly believe that the school's strong **emphasis in the learning-to-learn attitude and inculcation of logical thinking skills are critical in my career development.**

Besides academics, the peer support and network I have forged were things I enjoyed most in my days with SMU SIS. Those friends are the ones I hung out with, while studying and working on projects together. We have developed a close bond and remained in touch even after so many years. Along with an active campus life, the school has helped to **transform students like myself into mature and well-rounded graduates ready to embrace changes in this ever-changing digital age.**

Desmond Wong
Senior Manager
(Technology Consulting),
Accenture
Class of 2008

SCHOLARSHIPS

SMU offers an innovative package of scholarships, study awards, bursaries, and generous loan schemes that will provide all candidates the road to financial freedom.

For Freshmen

ASEAN Undergraduate Scholarship	Bangkok Bank Scholarship	De Suantio Scholarship
Gary Kunis Scholarship in Entrepreneurship and Technopreneurship	Lee Kong Chian Scholars' Programme	Li Ka Shing Endowed Scholarship
Lim Siah Mong Scholarship	LKY-STEP Award	Ng Kai Wa Scholarship
Sing Lun Scholarship	SMU Global Impact Scholarship Award	SMU Merit Scholarship Programme
SMU Steven Miller Scholarship	SMU-School of Information Systems Scholarship	Tahir Indonesian Scholarship
Tahir Scholarship	Tanoto Scholarship	University Study Award

Fast-track Programmes

SIS students can pursue a Bachelor's and Masters' programme concurrently through:

SMU-Carnegie Mellon Masters (Pittsburgh, USA) under the National Infocomm Scholarship offered by IMDA	SMU BSc (IS) & Master of IT in Business (e.g. Analytics Track, Financial Services Analytics Track, Financial Technology Track)	SMU BSc (IS) & Master of Applied Information Systems

For Seniors

ABS Study Award	Chan Chong Beng Entrepreneurship Scholarship	DFS Scholarship
Eurex Asia Scholarship	Fung Scholarship	Gary Kunis Scholarship in Entrepreneurship and Technopreneurship
Goh Foundation Endowed Scholarship	KKH Scholarship	Lee Foundation Student Life Scholarship
Mochtar Riady Scholarship	Ng Kai Wa Scholarship	NYC System Engineering Study Award
Paypal FinTech Scholarship	SAS Institute Bachelor of Science Scholarship	SICC International Exchange Scholarship
Sing Lun Scholarship	SMU Alumni Scholarship	SMU Steven Miller Scholarship
SMU-School of Information Systems Scholarship	Temasek Foundation International Leadership Enrichment and Regional Networking Programme @ Singapore Management University 2016	Wilmar Scholarship

Please note that the list is not exhaustive. For more details, scan the QR code or visit: **www.smu.edu.sg/about/financial/scholarships**

SMU

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A Different U

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