

# HEY!

**HEY!**

*AR*

SCAN THIS PAGE  
to join NTU student  
Charlize Su on  
exchange



**▶ INSIDE**

What's in your luggage?

Five people you'll meet in uni

**▶ WIN**

OneNTU Core Values tote bags and tumblers, BTS book, cake 'n' coffee, and more



*GO*

# PLACES

IT ALL STARTS HERE



**HEY!**

*AR*

SCAN THIS PAGE to watch how to maximise your AR experience

# THE NTU HEY! AR GUIDE

Follow the trail of HEY! AR bubbles and brackets to uncover hidden surprises – including 3D objects and giveaways – within these pages

## PLACE 3D OBJECTS IN YOUR ENVIRONMENT

Put a new spin on things

Tap to take a photo or hold to take a video

Tap to reset

Drag your finger on objects to move them, or near them to swivel them

Tap to go to selfie mode

Turn up the volume to get the whole picture

## WATCH PICTURES COME TO LIFE

See the page morph into a video

## TAKE PART IN COMPETITIONS AND GIVEAWAYS

Tap here to submit a contest entry

Enter contest



Available on App Store, Google Play & AppGallery



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STUDENT ON COVER Charlize Su



# WHAT'S IN MY LUGGAGE?

NTU students on exchange share what they took with them on their overseas learning adventures and the keepsakes that they'll be bringing home

Final-year student Charlize Su spent a semester on exchange at a Dutch university early this year, taking psychology and communication modules.

Academics aside, she learnt how to cook and manage things independently. Now back in Singapore, she says living on her own gave her time to contemplate.

"With a change of pace, I had time to think about life and what I want to do. Living in Europe has made me consider working abroad in the future," she says.



Charlize Su Year 4, psychology Exchange in Erasmus University Rotterdam, the Netherlands

HEY!

AR

SCAN THIS PHOTO to check out "Chef Su's" yummy creations

Take there

### ASIAN FOOD

"I can't help but crave Asian food when I'm far from home. So I brought a lot of noodles and pastes, such as Korean Samyang noodles, mala and bak kut teh.

Eating out in the Netherlands is expensive, so to save money I learnt how to cook. Meals were a team effort with my housemates; I picked up tips when we cooked together and tried different online recipes, even fusion cuisine. It was a learning journey, and it felt great to see my friends enjoy my food... So I think I'm a chef now."

HEY!

AR

SCAN THIS PHOTO to see Zi Jie lift 200kg in a Thai gym

### GYM KIT

(Strength training belt, knee sleeves, wrist wraps and liquid chalk)

"I've been powerlifting for three years. It's an outlet for me to release tension and any stress I may be feeling. My kit isn't readily available, so I brought my equipment over."

Take there

### CHULALONGKORN UNIVERSITY BELT

"This is a belt I need to wear to every class. Thai university students wear uniforms here, which I found surprising. It took a while to get used to wearing a uniform again. It can feel nasty when my shoes or pants get wet, even up to the mid-calves, during Bangkok's monsoon season."

Bring home

Kim Zi Jie Year 4, public policy & global affairs Exchange in Chulalongkorn University, Thailand

### SOUVENIRS FOR FAMILY

"I've been buying postcards, keychains, banners and magnets. I try to get a souvenir from each major place I've visited. I initially had some concerns about going to North America, having heard news of discrimination against Asians. However, after being in Canada for the past few months, this belief has changed as I've found the people here rather accepting of diversity."

Bring home

### COMFORTABLE SHOES

"I make it a habit to walk around George Washington University's city centre campus, where classes and food courts are accessible. In fact, we are only a few minutes' walk from the White House. My friends and I also hiked along the Great Falls in Virginia and explored the US' great national parks."

Take there

Yap Shen Hwei Year 3, computer science Exchange in University of Waterloo, Canada

Mohamed Nur Hazim Year 3, computer science Exchange in George Washington University, United States

### PHOTOS OF EVERYDAY LIFE

"I've been taking many, many photos of random and mundane things, not just the attractions. I want to remember the small details like the apartment I lived in or the time spent with my university friends."

Take there

### ROOM DECOR

"I am quite sentimental, so I brought my stuffed toy, photos with friends and family, LED lights and diffuser to make my stay comforting and feel like home."

Athena Hair, Year 3, business Exchange in University of New South Wales, Australia

### SHEEP POSTCARD

"I met a cute sheep during a site visit to The Open Air Museum at Lyngby for my history of technology class. I decided to buy a postcard of her and frame it up. The postcard is now on my desk and 'accompanies me' while I study."

Bring home

### FLØDEBOLLER

"I volunteer after class at a non-profit organisation called Specialsport.dk. The founder introduced me to this Danish chocolate-covered marshmallow sweet that tastes really good."

Gong Deyang Year 3, civil engineering Exchange in Technical University of Denmark, Denmark

HEY!

AR

SCAN THIS PHOTO for a peek into Hazim's everyday moments



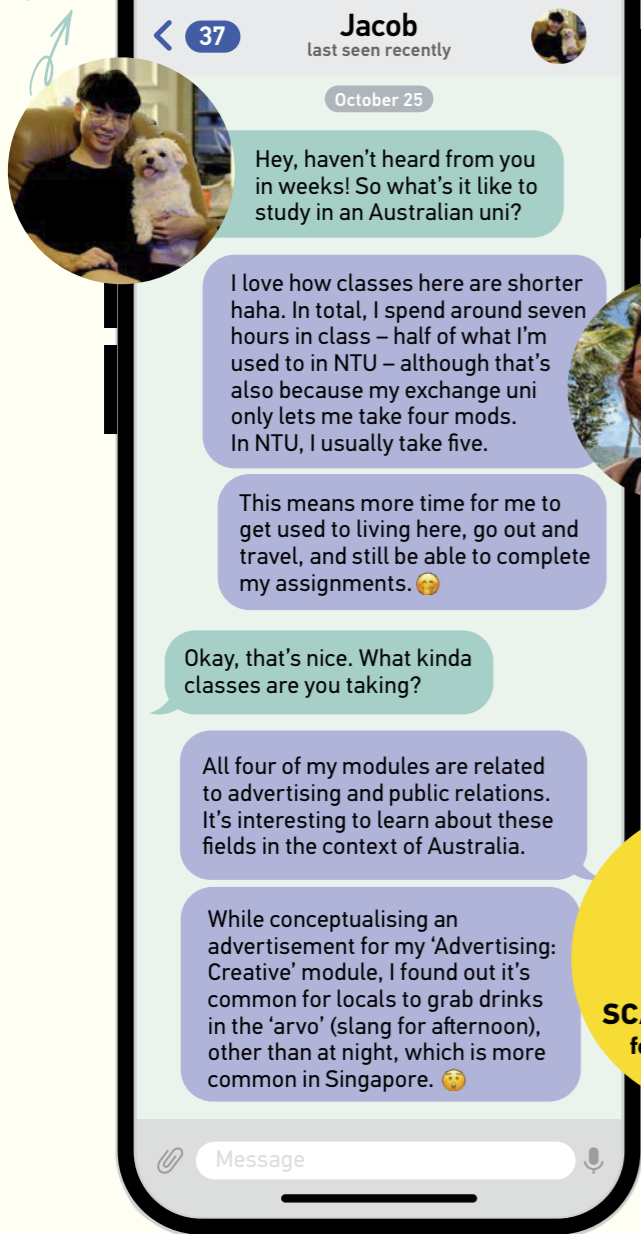
### THE WORLD IS YOUR CLASSROOM

Jet off to study, work or even volunteer in over 30 countries. Students can take on long or short stints at international universities and organisations through various NTU programmes.

# SO, *tele* ME ABOUT EXCHANGE

Currently on a semester's exchange at Western Sydney University, third-year communication student Christalyn Tan chats with her friend, Jacob Loh, a computer science freshman who is curious about exchange

Jacob



Christalyn

HEY! AR SCAN THIS PHOTO for a taste of life at my uni

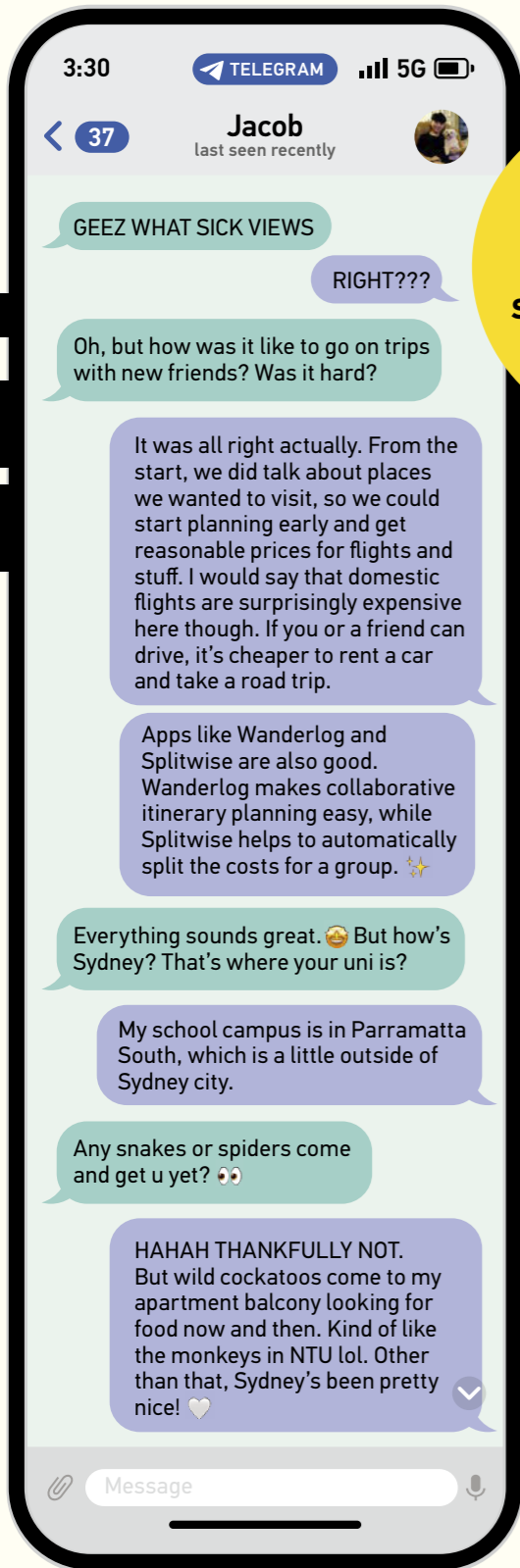


HEY! AR SCAN THIS PHOTO for a taste of life at my uni



HEY! AR SCAN THIS PHOTO to see me setting sail with new pals





**HEY!**  
*AR*  
**SCAN THIS PHOTO**  
to meet these frequent visitors to my balcony



Hahah they're cute, you should make them your pets. 🐦

It feels like they already are! 🐦

Now I wanna go for exchange too. How do u apply for it and when do u go?

There are usually two windows of opportunities per year. I applied at the start of this year to do my exchange in the first semester of the current academic year.

You have to "bid" for your preferred university within 2 tries, listing up to three uni options each time. If you fail to get even your third choice uni, don't worry, NTU will assign you a university that will be a good match.

Here's a tip – having good grades will help you get your top choice! 🙌

As for when you can go, I think it depends on your course, but most people go in Year 3.

Woah okay. I gotta work hard consistently from now on then, but I'm sure it'll be worth it. 🙌

Hahahah yeah, exchange is definitely one of the biggest highlights of being in NTU 🙌

Message

Christalyn loves art and makes it her mission to visit an art gallery in every country she visits. She unwinds after a long day by catching up on her favourite TV series, snuggled in bed with her dog.



HEY!  
STUDENT  
WRITER



**HEY!**  
*AR*  
**SCAN THIS PHOTO**  
to soak in the passion of Rwandan football fans with communication student Ervin Ang at the Kigali Pele Stadium

HEY! EXPLORE  
Eunice Sng

Photo: Samuel He; Video: Ervin Ang

# CHASING STORIES IN RWANDA



Chong Xin Wei and Bernadette Toh (far right), with Mr Yu Qing Hong and his 10-year-old daughter, Umugwaneza Ange Lana Teta. The newsmakers feature in another classmate's story on interracial families.

Photo: Samuel He

HEY! student writer Eunice Sng was among budding reporters from NTU who went to Rwanda, an East African nation, to cover stories ranging from athletes' dreams to the rising fashion industry. She writes about the experience

The land of 1,000 hills. Mountain gorillas. Genocide. This is what comes to mind when one thinks of

Rwanda – a small African country when compared to its neighbours, but much larger than Singapore, rich with wildlife, minerals and a dark past.

It was the destination for 13 journalism students taking the Going Overseas for Advanced Reporting module in the Wee Kim Wee School of Communication & Information, who went with their tutors to the Rwandan capital Kigali for almost two weeks.

The budding reporters worked on stories, photographs and videos on fintech, fashion, coffee, hospitals, kung fu, football and more.





### On the ground

Final-year student reporter Bryan Kow, 24, says: "I was given a lot of freedom to work on my stories. I think being thrown into the deep end really taught me how to be resilient and what it means to be a journalist."

For most students, it was their first time reporting overseas, and they had to navigate language barriers, cultural differences and working with people from less privileged backgrounds.

"I learnt more about the ethics of journalism. We couldn't just photograph something as it was, but we had to think carefully about the impact of showing certain sides of their life," says visuals editor Ryan Chiong, who photographed farmers and their families in the rural villages outside Kigali.

### Rwanda on the rise

Rwanda was chosen as this year's destination by journalism tutors Hedwig Alfred and Samuel He after hearing more than one speech by Singapore Prime Minister Lee Hsien Loong, who was in Rwanda last year, calling on Singapore-based businesses to consider setting up shop there.

The 1994 genocide of the Tutsis, which claimed more than half a million lives, is remembered everywhere in Rwanda. Its people cannot forget that painful part of their history but have gone on to rebuild a new home for all.



Photo: Samuel He

Imam Ngajaberura Aboubakar giving (from left) Eunice Sng and Erin Liam a tour of Al-Fatah mosque, the oldest mosque in Rwanda.



Photo: Samuel He

Ivy Chok (left) filming an interview with a cobbler at the Kimisagara neighbourhood in Kigali for her documentary.



Photo: Samuel He; Video: Ivy Chok

The country has moved from strength to strength economically and politically, and though small compared to its neighbours, is markedly clean and safe. Some people describe Rwanda as the Singapore of Africa.

### Almost stranded

The journalism students had to get used to travelling long distances to get to people they wanted to interview in the highlands and farmlands of Rwanda.

Ivy Chok, 22, got stuck at night near the Volcanoes National Park while working on a story about farmers living near wildlife. The driver's car key broke in the ignition.

"We were in the middle of nowhere. My phone did not have data, it was getting colder and pitch black, and we did not know what to do," she says.

Eventually, a passing truck gave them a mechanic's number. The man arrived to fix the lock and Ivy returned safely to Kigali by 11pm, two hours later than planned.

### Adapt and learn

The students also had to learn to work with translators. A few newsmakers could only speak Kinyarwanda, one of Rwanda's national languages, so translators had to accompany the students for interviews.

Aditi Bharade, 22, said students are spoilt in Singapore because they can easily reach people through email and text messages.

"But being there really taught me to go back to the basics of journalism, such as finding people on the ground rather than relying on social media to get information I needed."

Every night, the students met with the tutors to discuss their progress and to plan the next day's activities. The tutors often joined the students on their assignments too.

Ms Alfred, the school's journalism department lead, said the students did well in their new environment.

"I was impressed at how they adapted to the way things work in Kigali and its outskirts, how they jumped on motorcycles to get from place to place and got Rwandans to talk to the foreigners from Singapore," she says.

Now back home, the students' stories are completed and some have been published in The Straits Times, The Business Times, tabla! and South China Morning Post.

Print editor Ervin Ang, 24, says: "Although we were delivering only two to three articles each, there was a lot of work behind the scenes. But on the good side, the experience you get is once in a lifetime."

The class treated newsmakers to a hearty dinner at the Khana Kazana restaurant on the second last night of the trip.



Photo: Ryan Chiong



Eunice loves burning vanilla-scented candles and discovering the latest cultural events. When she is not busy chasing deadlines, you will find her curled up in bed with a fantasy novel.

HEY! STUDENT WRITER



# LEARNING TO EAT LIKE A LOCAL

HEY! student writer Bernadette Toh takes Ukrainian exchange student Yegor Holikov on a campus food tour to eat like a true-blue Singaporean

HEY!  
AR  
SCAN THIS PHOTO to see Yegor react to a spoonful of sambal



"When I saw the fried tofu, I was wondering if it was cheese," he says. "I thought it might be fried cottage cheese."

Nasi ayam penyet is an Indonesian dish. The fragrant fried chicken is smashed with a pestle and mortar to make it softer. It's typically served with rice, cucumber slices, fried tofu and sambal.

The nasi ayam penyet from the Nanyang Crescent Hall canteen came with a generous dollop of the infamous chilli paste, which hit Yegor hard.

"Oh my goodness, this is too spicy," he says.

But he loved the tender fried chicken. The chicken leg is marinated in turmeric – which Yegor correctly guessed was kurkuma, the Ukrainian word for turmeric – among other spices, and topped with crispy

Nothing brings people together more than food. Especially in Singapore, billed as a foodie's paradise. Whenever friends from abroad visit, I'm always ready to introduce them to my must-try local dishes. I showed Yegor, 23, some of my favourite eats in NTU and asked him to guess what they are.

## 1 CHAR KWAY TEOW

This dish is not entirely foreign to Yegor. As he is a postgraduate student in Taipei's National Yang Ming Chiao Tung University on exchange here, he has lived in Taiwan for a few years and has come across similar dishes.

"It's different from the noodles I have tried before, which are usually thinner and longer," he says.

Char kway teow is a wok-fried noodle dish with roots in Teochew culture. Flat rice noodles are stir-fried over high heat with light and dark soya sauce, garlic, chilli, egg, fish cake, Chinese sausage and beansprouts.

Yegor tried the version from NIE's canteen, which came with both fresh prawns and chicken meat.

He was pleasantly surprised by the wedge of lime served with this hawker classic, meant to be squeezed over the noodles.

"I'm a big fan of citrus. I love anything sour, so it's definitely a plus for me," he says.

## 2 NASI AYAM PENYET

Who would have thought that nasi ayam penyet would remind Yegor of Eastern European food?

crumbs. The dish reminded him of oven-roasted chicken made by his grandmother.

"That's the taste of my childhood."

## 3 KOPI PENG

Yegor usually gets his caffeine fix from espresso-based drinks at North Spine's Venture Drive Coffee, so kopi peng is unfamiliar to him.

Kopi peng is local iced coffee with condensed milk. It is made from Robusta coffee beans roasted with sugar and margarine under high heat to caramelise the beans. The ground coffee is then mixed with hot water and strained through a sock.

"It's like a mix of hot cocoa and coffee to me," says Yegor. "I like it because it's sweet and bitter at the same time."

## 4 WAFFLE WITH KAYA

And last but certainly not least, dessert.

Yegor's last meal of his NTU food tour was waffle with kaya. He tried the one at Nanyang Crescent Hall canteen that is made with pandan.

"This looks like a Belgian waffle, but it's green," Yegor says. "Belgian waffles are crispy. Here, they are softer."

These old-school waffles are a popular snack for NTU students and can also be found in many neighbourhood bakeries around the island. They can come plain or filled with various classic spreads, such as peanut butter or blueberry jam.

Yegor could instantly tell that the spread in his waffle was kaya, the same coconut jam found in kaya toasts.

He added that the waffle was not too sweet and paired perfectly with his kopi peng.

"Dessert definitely won my heart," says Yegor with a laugh. "Or you could say, won my stomach!"

## A FOOD HAVEN

"I really enjoyed today's food because I can taste the different flavours and different spices," says Yegor, who is studying visual arts at NTU's School of Art, Design & Media.

When it comes to food options, we're certainly spoilt for choice.

"It never gets boring," Yegor adds.

There are many more dishes that Yegor has yet to try on our campus, which is home to 16 food courts and 30 restaurants and F&B outlets. What would you recommend to him for his next local food adventure?

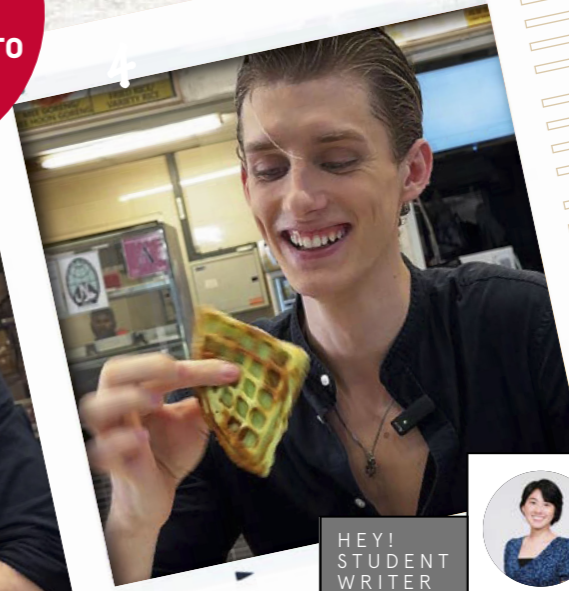
Over in Thailand, philosophy student Alistair Yap, currently on exchange in Chulalongkorn University in Bangkok, tries out signature dishes from the "land of smiles".

Since joining NTU, the final-year student has done a short summer stint in Cambodia and spent a semester at University of Wisconsin-Eau Claire in the United States.



HEY!  
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SCAN THIS PHOTO to try "a meatier version of laksa", Thai tangyuan (glutinous rice balls) and more

HEY!  
AR  
SCAN THIS PHOTO for his take on kopi peng



HEY! STUDENT WRITER



Bernadette loves storytelling, from books to films to documentaries. In her free time, she hunts for the best teh peng in town.



# ADVENTURES ABROAD

Come to NTU for global adventures

SCAN THIS PHOTO



SCAN THIS PHOTO

Conducting health screenings for women and their children.

Community involvement project in Kolkata, India



Tech-ing coding up a notch.

Internship in Vietnam

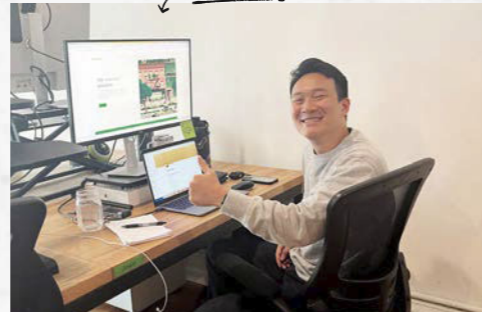
HEY!  
AR

SCAN THIS PHOTO to see how NTU's budding doctors are making a difference



Live, lab, love.

Research internship in Switzerland



On international assignment.

Entrepreneurship internship in the States



To magical places with friends.

Weekend trips while on exchange in Scotland



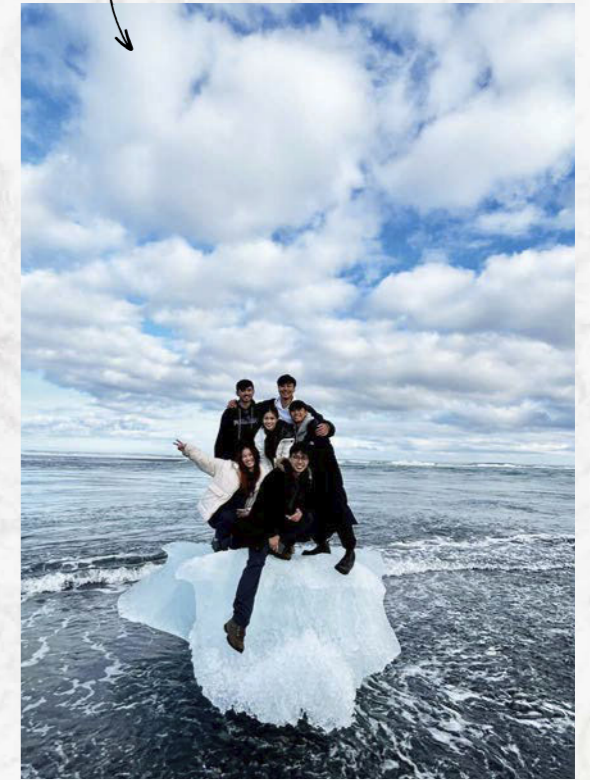
From boardroom to slope session.

Entrepreneurship internship in the States



The tip of the iceberg of my NTU experience.

Semester in Sweden



Swede dreams (are made of this).



Swedish cultural immersion on exchange

Leading green efforts.

Leadership symposium in Thailand





# Stylish staples

We ask Sophia Riaz, a mathematical & computer sciences freshman, and Riyadh Al-Muttaqin, a final-year sociology student, to show us their must-haves for school

HEY!

AR

SCAN THIS PHOTO to bag this versatile NTU tote

### Tote bag

Functional and practical, this is perfect for carrying all your university essentials and doubles up as a grocery bag too.

### Claw clip

The quintessential 90s hair accessory is back in trend. Chic and effortless to wear, it keeps your hair out of the way when you're moving about.

### Notebook

The traditional pad is still Sophia's notebook of choice. She finds it faster and easier to take down notes and formulae – and to doodle – with pen and paper.

### Rechargeable fan

A great way to stay cool and comfortable in hot, humid weather.

### Japanese fan

It's back to basics when the electric fan's battery goes flat. Sophia's stylish hand fan is a souvenir from her pre-university family trip to Kyoto.

Sophia Riaz

"I got this while on exchange in Canada and I now take it to class to snap photos of friends."



### Noise-cancelling headphones

There's always something happening on the NTU Smart Campus, but sometimes you need to drown out the hustle and bustle to focus on your work.

### Reusable cup sleeve

Lightweight and portable, this is handy to have as the fabric absorbs condensation from Riyadh's fave ice-cold drink and protects his hand when the beverage is piping hot.

### Medicine bag

Always prepared, Riyadh keeps this packed with useful items like antihistamines, paracetamol, lip balm, tissue and more.

### Film camera

Say cheese! Some of your best memories are made in university and Riyadh hopes to immortalise these cherished times.

HEY!

AR

SCAN THIS PHOTO to see more staples Riyadh and Sophia swear by

### Tumbler

Staying hydrated is easy with plenty of water coolers around NTU. Riyadh's flask spots a Pokémon-like character sticker designed by a friend.

Riyadh Al-Muttaqin

# Study TIPS

## FROM THE PRO(F)S

Take inspiration from how your profs prepared for exams when they were students (and discover the science of why their methods work)



Assoc Prof Ajai Vyas, School of Biological Sciences

Assoc Prof Vyas with sugarcane plants that he grew when he was studying agriculture as an undergraduate.

### My favourite study tip when I was a student:

"I stopped studying a week before the examinations and slept eight hours or more every day that week. During that time, I also walked around a lot and ate three square meals a day."

### Why it works:

Contrary to popular belief, burning the midnight oil may not lead to better results. Studies show that seven to nine hours of sleep per night is required for the brain to function properly and a lack of sleep affects the ability of the brain to make memories. Equally important are a healthy diet and being physically active, which research regularly shows can significantly improve wellbeing by reducing anxiety and other negative feelings like stress from the upcoming exams.



Dr Wilding as a medical student.

Dr Lucy Victoria Everett Wilding, Assistant Dean (Year 1 and Year 2), Lee Kong Chian School of Medicine

### My favourite study tip when I was a student:

"I studied in cafes and coffee shops as the background noise and the people milling around helped me to concentrate."

### Why it works:

There is evidence that ambient noise, for example, the sounds of people chatting and the whir of the coffee machine, may improve concentration in some people and even boost their productivity. This is because background noise can mask distracting sounds, which helps you stay focused on the task at hand. According to science, whether or not such noise distracts or helps during study sessions may depend on your personality. Extroverts, take note – this method might work well for you.



Assoc Prof Victoria Leong, School of Social Sciences

Assoc Prof Leong when she was a junior research fellow at the University of Cambridge in the UK.

### My favourite study tip when I was a student:

"I revised my work after every lecture. I also asked a lot of questions during the semester. No question is stupid. If your professor knows you by name, it means you have bothered your professor enough with your questions."

### Why it works:

Repetition of information reinforces connections between nerve cells in the brain, which helps us remember new material. For better recall of the information in the long term, psychologists recommend spacing out study sessions instead of cramming intensively. Being actively engaged in learning such as by asking questions also activates the brain to process and store new information.



Assoc Prof Jung Younbo, Associate Chair (Academic) at Wee Kim Wee School of Communication & Information

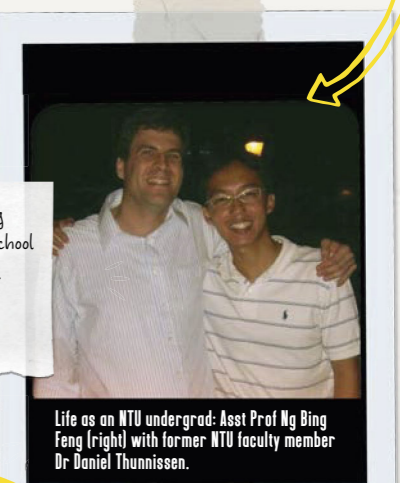
Assoc Prof Jung when he was a postgraduate student at the University of Southern California in the US.

### My favourite study tip when I was a student:

"Rehearse the information you are trying to learn out loud instead of just reading it silently."

### Why it works:

Studies have found that there is a memory advantage to saying words out loud versus saying them in your head. It's because the act of speaking and hearing yourself helps you remember better. This phenomenon of learning by doing, dubbed the "production effect", speeds up what you put into long-term memory.



Asst Prof Ng Bing Feng, School of Mechanical & Aerospace Engineering

Life as an NTU undergrad: Asst Prof Ng Bing Feng (right) with former NTU faculty member Dr Daniel Thunnissen.

HEY!  
AR

SCAN THIS IMAGE to win a box of 7 TAG Espresso coffee capsules (worth \$17.85) to fuel your study sessions



### My favourite study tip when I was a student:

"Eat dark chocolate as you study."

### Why it works:

Dark chocolate contains high levels of compounds called flavonoids that increase blood flow to the brain. Studies have found a link between flavonoids and brain benefits related to memory and thinking. Dark chocolate also boosts the production of feel-good hormones called endorphins, helping students maintain a positive mood during the revision period.

# CYBER SECURITY INTERNSHIPS UNCOVERED

NTU students share what it's like to be at the frontline of defending cyber space

HEY!

AR  
SCAN THIS PAGE to uncover the tricks of "hackers"



Every Monday, Daniel Tan attends a morning meeting, plans his week's schedule, and works on his projects, before wrapping up his day after a scrum meeting with his supervisor.

But unlike any other internship, Daniel, a third-year NTU computer science student, plays the role of a "hacker" during his eight-month stint with local cyber security company Ensign InfoSecurity.

He is part of a group called the "red team" that runs "penetration tests" to find bugs and vulnerabilities in clients' websites and networks that can be exploited by hackers.

**"Before the internship, I'd never conducted testing on an actual website," says Daniel, who only had experience finding bugs in test websites such as those in hacking competitions and computer science classes in NTU and polytechnic. "But now, I've gone through the complete testing process. It's an eye-opening experience."**



Daniel Tan's work at cyber security firm Ensign InfoSecurity involved "hacking" websites.

Photo: Ensign InfoSecurity

There is also an urgency in the tests as he needs to find security gaps before cyber criminals exploit them. A similar gravity pervades the work of other NTU students in cyber security stints.

In website testing, Daniel puts himself in the shoes of a hacker to figure out how a cyber crook would exploit clients' websites. He then suggests steps clients can take to fix the issues.

Ms Serene Yeo, Vice President of Human Resources at Ensign InfoSecurity, says that the NTU interns with the company "bring fresh perspectives and ideas" and contribute to "meaningful and impactful work".

## DEFENDING CRITICAL INFRASTRUCTURE

Besides offence, there is a defensive aspect to cyber security, including protecting systems that control critical infrastructure, such as those in the energy and water sectors.

Don Lim defended systems for power generation that cannot be shut down to deal with cyber attacks.



Cyber attacks on critical infrastructure can cause great harm. For instance, in 2021, hackers shut down a major pipeline supplying almost half of the fuel for the United States' East Coast, causing an airline fuel shortage and panic buying at gas stations.

This made the work of NTU student Don Lim during a recent two-month internship at Singapore power-generation company YTL PowerSeraya much more crucial.

Don realised that when third-party vendors are engaged to update systems that control power generation, there is a risk that hackers may infiltrate the vendors and piggyback on them to breach a company's critical systems.

**"If the power generation systems are attacked, they can't just be shut down to deal with the attack because energy production needs to run 24/7," explains Don.**

To ensure any cyber attacks through vendors do not even reach these crucial systems, Don proposed to safely test update patches on virtual recreations of the systems. This could confine attack attempts to these replicas without risking the actual systems.

## KEEPING TABS ON THREATS

Monitoring cyber threats has its challenges. NTU student Lee Zhiyong, who is on an eight-month internship with local information technology services company NCS, helps to look out for threats its customers may face.

When a security issue is flagged by NCS's systems, Zhiyong must quickly assess if it is a genuine threat so that incident response colleagues can swiftly step in to contain the problem if needed.

Keeping up with the fast-paced nature of his work was initially difficult for him. But he got up to speed after reading up on his own and learning from his colleagues.

Potential threats he has encountered include suspicious users going through foreign IP addresses – instead of Singapore ones – to access the systems of local customers. It is then a race against time for Zhiyong to establish the facts of these flagged cases promptly.

# LUXE

## FOOD FOR LESS

Sumptuous eats at a fraction of restaurant prices, right here at NTU

“The dumplings are very good quality for the price. I really like their fried lamian (wheat noodles) too.”

SIMON JENSEN  
CIVIL  
ENGINEERING,  
ON EXCHANGE  
FROM DENMARK



### Xiao long bao

\$4.80 FOR 6 PIECES

Wonderful Café, Canteen 2

If perfection could fit between a pair of chopsticks, this would be it. Freshly steamed to order, a basket of these tasty soup dumplings will lift even the dullest of spirits.

Delicate pleated dumpling skin, flavourful broth, juicy meat and generous (DIY) portions of sweet vinegar and ginger slices? Green flags everywhere.

Not to mention that these morsels are only half the price of their doppelgangers in Din Tai Fung.



### HACKS TO GET INTO CYBER SECURITY

Many hiring companies consider students with computer science degrees, like NTU's, regardless of whether they specialised in cyber security.

But employees need to eventually apply for professional cyber security certifications to perform better.

However, Zhiyong points out that many enter the profession midway from unrelated fields, like accounting and chemistry, after obtaining certifications.

“They attended online courses, some of which lead to professional certifications. Many institutions offer such part-time and short courses,” he says of this alternative route into the hot sector.

For instance, NTU's Centre for Professional & Continuing Education offers short courses on network security and ethical hacking.

“You may start at an entry level, but with more experience, anyone can succeed in the industry. It boils down to this: You must be hungry to learn,” Zhiyong adds.

Daniel says that students do not need to be overly anxious and think they must rush to get the certifications at the start. Instead, they can take a divide and conquer approach.

**“Small steps are very important,” he says, adding that students can develop foundational cyber security skills through platforms like hacking competitions in NTU, as well as online learning programmes. “Progressively build up your skills and knowledge. The certifications will come in time.”**

Some employers support their employees in getting certified. For NCS, its talent programme for university graduates has a cyber track that sponsors professional certifications.

In Daniel's case, even though he is an intern, Ensign assisted by covering the examination fee for one of his certifications in web application penetration testing.

“My managers were very supportive and encouraged me and the other interns to pursue the certification. They gave us time to practise and take the exam,” adds Daniel, who took on the Ensign internship after speaking with the company's staff at a career fair organised by NTU's Career & Attachment Office.



Lee Zhiyong helps to look out for and verify cyber threats as part of his internship.

Photo: NTU Students' Computer Science & Engineering Club

### CAREER BOOST

Zhiyong chose the threat monitoring internship because he sees it as a stepping stone to becoming an incident responder in future and possibly working in digital forensics, which seeks to understand how a cyber attack happened.

**“I've always wanted to be a detective and being in cyber security allows me to be like a sleuth solving puzzle-like challenges,” he explains. Reading about big corporations getting hacked in the news spurred him to learn how to keep digital spaces safe as well.**

Zhiyong says his NCS stint gave him a better idea of the professional certifications he needs to boost his career prospects, adding: “The internship reaffirmed that cyber security is the right path for me.”

Besides technical skills, Zhiyong also picked up communication skills, such as learning how to communicate clearly and quickly about time-sensitive issues.

Don's time at YTL made him even more interested in cyber security than before. He first encountered the topic when a Minecraft video game server he hosted for friends was hit by a suspected cyber attack.

**“I thought cyber defence was about protecting one computer system in an organisation and keeping hackers away,” says Don. “But I realised there are actually many linked systems that need defending, which I found very interesting.”**

“Even though I was just an intern, YTL was open to hearing my suggestions on how the company's systems could be protected,” he adds. “My supervisor also gave me the opportunity to join meetings with vendors and attend an industry seminar, which exposed me to even more real world cyber security scenarios and applications.”

## Spicy ramen

\$6.70

Kiso Japanese Cuisine, Canteen 11

Sometimes all you need is a nourishing bowl of ramen. Enter this humble stall that gives Ippudo a run for their money.

The spicy ramen's base is a full-bodied tonkotsu broth topped with fragrant Japanese chilli oil. The ramen noodles are al dente and

delightfully springy, pairing well with the thick slices of smoky glazed char siu, which are equal parts lean and fatty.

Slurping up the entire bowl of ramen with its crunchy slivers of black fungus is easy, as the broth is savoury without being too salty or oily.

Other notable dishes here (each under \$7) include the Japanese curries and the chicken chop dry ramen, which boasts a sizeable piece of fried katsu, an egg and fragrant chilli minced meat sauce.

“The ramen noodles from this stall are nice and springy. On some days when I'm tired or didn't do well on my quiz, having yummy food like this invigorates me.

AIDAN LING

RENAISSANCE ENGINEERING PROGRAMME



## Brownie

\$2 OR \$1.50 WITH A MAIN  
The Tea Party, The Arc

Looking for a post-lunch treat? Say hello to The Tea Party's brownie.

This dense, fudgy square can easily cost two or three times more in a swanky café.

Finicky pastry lovers may be pleased to find that the chocolate used is dark and doesn't taste like "cheap chocolate". The crackly top layer adds welcome texture.

The café offers a \$5 teatime set of a brownie or scone with a coffee. Pro tip: Let the brownie, which is served chilled, warm up to room temperature for a truly heavenly experience.

“The brownie is delicious with a scoop of ice cream. The portion size is just right as dessert after a meal.

CHEN SZEYI  
SOCIAL SCIENCES



“The fruits are really fresh. The pack of two tarts is attractively priced. Since the tart is not too sweet compared to a slice of cake, I don't feel guilty after eating it.

SUJASHA  
GHOSH  
BIOLOGICAL  
SCIENCES



## Mixed fruit tartlet

\$4.80 FOR 2 TARTS

June's Breathe Café,  
Experimental Medicine  
Building

Treat yourself to a leisurely meal in this cosy nook of a café. Overlooking an expanse of green, the eatery is a relaxing respite from the hustle and bustle of NTU's academic complexes.

Aunty June's mixed fruit tartlet boasts a juicy array of fresh fruits like kiwi, blueberries and strawberry on a light, creamy custard. The homemade tart crust is buttery and slightly nutty with a good bite.

Reminiscent of fancy high tea, their seasonal cakes come in interesting flavours like ondeh ondeh and yuzu osmanthus. Other popular items include the chunky banana cake (\$2.50), cream puffs and quiches.

**“The well-seasoned beef has a good umami flavour. It goes great with the yolk that just oozes out from the soft egg.**

**The edamame provides a nutty texture while the pickles are a nice palate cleanser.**

**DARREN CHAN  
ACCOUNTANCY & BUSINESS**

### *Gyudon*

**\$9  
Connect71 Café, NTU Innovation Centre**

The beef bowl in this café is a colourful departure from the gyudon in a typical Japanese restaurant.

Apart from the thinly sliced beef and onions simmered in a mildly sweet sauce and fluffy short-grain rice, you can tuck into an onsen egg, edamame, purple pickles and a smattering of nori seaweed strips.

Each bite is well balanced with every ingredient working harmoniously.

Cosy and minimalist, this alumni-owned café is a popular spot to unwind with friends over an iced matcha latte or catch up on readings.



**HEY!**

*AR*

**SCAN THIS PHOTO  
to win a cake and  
drink set from  
Connect71 Café when  
you share a picture of  
your favourite dessert  
in NTU**



**“The pasta is creamy and savoury with a light tang; there’s a good balance of cheesy and meaty flavours.**

**YANG XUNSHENG  
RECENT  
MECHANICAL  
ENGINEERING  
GRAD**



### *Pinky pasta*

**\$8.50 WITH A FREE  
DRINK** (iced lemon tea or water)

**The Tea Party, The Arc**

Pasta options are plentiful on campus. What sets this dish apart is its secret sauce – a concoction of beef bolognese spiced with cream and topped with sausage slices and mozzarella cheese – on flat linguine noodles.

All mains come with a free drink

here. The slightly bitter iced lemon tea helps to cut the richness of the pasta.

Another hot favourite is the café’s 220g steak and mash (\$11.90), with the sirloin beef done the way you like it.

The café frequently runs short-term promos. For example, you can get a free brownie with a main, re-order discounts (up to 10% off), exam week sets and more. No wonder then that it’s packed during peak hours – plan your trip with care.

# FROM WASTE TO ENERGY

Perhaps the answer to a more sustainable planet is thinking outside the (used) box. See how NTU scientists are using junk in ingenious ways to fuel our world



## TAMARIND SHELLS → ELECTRICAL CONDUCTORS

A quintessential tropical fruit, tamarind is a key ingredient in dishes like assam prawns and pad thai. The shell of the pod-like legume need not be thrown away during food production, since it can be used to conduct and store electricity.

This is done by exploiting the rich carbon makeup and porous nature of the tamarind shells, turning them into extremely thin sheets that can conduct electricity in energy storage devices for cars, trains and lifts.



## PLASTIC → CLEAN FUEL

We all know that plastic can cause huge pollution problems. But life with plastics may become less problematic – with some fantastic ideas to turn them into fuel.

One team took marine litter collected from local waters and converted it into hydrogen and carbon products for clean electricity generation.

Another team developed a chemical process that uses light and a catalyst to break down the stubborn polymer bonds of plastics. Acids formed during this eco-friendly process can be applied in the production of green fuels such as hydrogen.



HEY!

AR

SCAN THIS PAGE to see what other trash NTU scientists have transformed into treasure

SCAN THIS VISUAL



SCAN THIS VISUAL

## WASTEPAPER → CARBON FOR BATTERIES

Don't discard your used paper bag just yet, since cheap wastepaper can be turned into crucial battery parts – all while releasing hardly any greenhouse gases.

Wastepaper is cut into smaller pieces and exposed to high temperatures, reducing it to pure carbon anodes, which are essential electricity-storing components in batteries.



## OLD SOLAR PANELS → SILICON FOR BATTERIES

Ever wondered what happens to expired solar panels? They get thrown out, just like most obsolete hardware.

Now there's an efficient way to save them from the incinerator. The solar panels are simply soaked in phosphoric acid – a substance commonly used in the F&B industry – twice to achieve a high recovery rate of silicon and at a higher purity.

The process is more sustainable and cheaper than existing methods of recycling. Even better, the high-quality silicon recovered is good enough to be used in lithium-ion batteries that power electric vehicles.



## ORANGE PEELS → PRECIOUS METALS

On the NTU Smart Campus, food isn't just fuel for us, it's also juice that powers up the environment. Citrus peels that are normally discarded can be used to turn old batteries into new ones.

The dried citrus peels are ground up into a powder and combined with citric acid to extract and reuse precious metals from spent lithium-ion batteries to create brand new ones. This method is an environmentally friendly alternative to the harmful chemicals and high temperatures used in common battery recycling processes.

Plus, 90% of precious metals were extracted from the old batteries, comparable to current approaches. Now that's a-peeling.



# THE FIVE PEOPLE YOU'LL MEET IN UNIVERSITY

## THE BESTIE FOR LIFE

This is the person you randomly sat next to in your first-ever tutorial. "Hey," they said, and things just picked up from there.

Before long, you cease to exist as individuals.

You'll be joined at the hip – sometimes literally when on the campus shuttle – and people will ask, with genuine concern in their voices, if they spot either one of you in school without the

other, whether everything is okay.

The two of you get a disgustingly sweet couple name that you'll roll your eyes at in public but secretly love and use unironically. And a few of your classmates will definitely try to ship you as an OTP.

This person will see you through the ups and downs of university life, and beyond that as you brave the new world of work and adulthood. Despite all the changes, they'll remain a constant in your life.



## THE SOCIAL BUTTERFLY

This person is everywhere, knows everyone, and can link you up with anyone. They're at all networking events and, like a butterfly flitting from flower to flower, often around the corner when you least expect it.

If you need to find someone, or have an in to the hottest party in town, the social butterfly is only a quick DM away.

You sometimes get exhausted looking at their social media accounts, because you can't figure out how it's humanly possible to know so many people.

Their Instagram stories are so numerous, they don't show as a series of lines at the top of your screen but appear as dots instead.

You wonder how they find time to study, but realise they'll have no problem charming their way into internships and job offers.



## THE INTERNATIONAL FRIEND

NTU is many a foreign student's top choice for exchange, and who can blame them? Spending a semester or two at one of the world's most beautiful campuses is a definite plus.

This is the pal you'll gladly share your favourite hawker

fare with, teach Singapore slang to, and bring to spots only true-blue locals know about.

They'll use "lah" with unintended comic effect when they speak, but at least they try. The Singapore imprint will be so strong they'll order Tiger beer in their home country.



## THE RESUME WARRIOR

Forget Instagram and TikTok – LinkedIn is this person's social media of choice, which you'll be asked to connect through within five minutes of meeting. If they have a TikTok account, it's all about the hustle and the seven things all successful people do.

You don't think this person knows the word sleep.

During the semester, they're juggling five classes with two part-time internships, building a startup, and being President of three clubs.

While you were at the gym or hanging out at cafes, they've somehow racked up nine internships in four years. You suspect their blood is 90% caffeine at this point.



## THE COOL PROF

This is the prof you mistake for another undergrad when they walk into class, until their laptop settles in full view of everyone and you realise this is a fully functional academic and your teacher.

Somehow, this prof is able to hold regular office hours, mentor three PhD students and reply to your panicked 11.59pm email three seconds later when your assignment isn't uploading.

You sign up for every one of their classes because you'll learn both the intricacies of your academic major and valuable life lessons along the way.

You wonder if it's even legal for a professor to be this cool – surely, as a matter of fairness, academic genius must be balanced out with social awkwardness. But no – the cool prof is also funny and warm, and has an impressive "fan club".

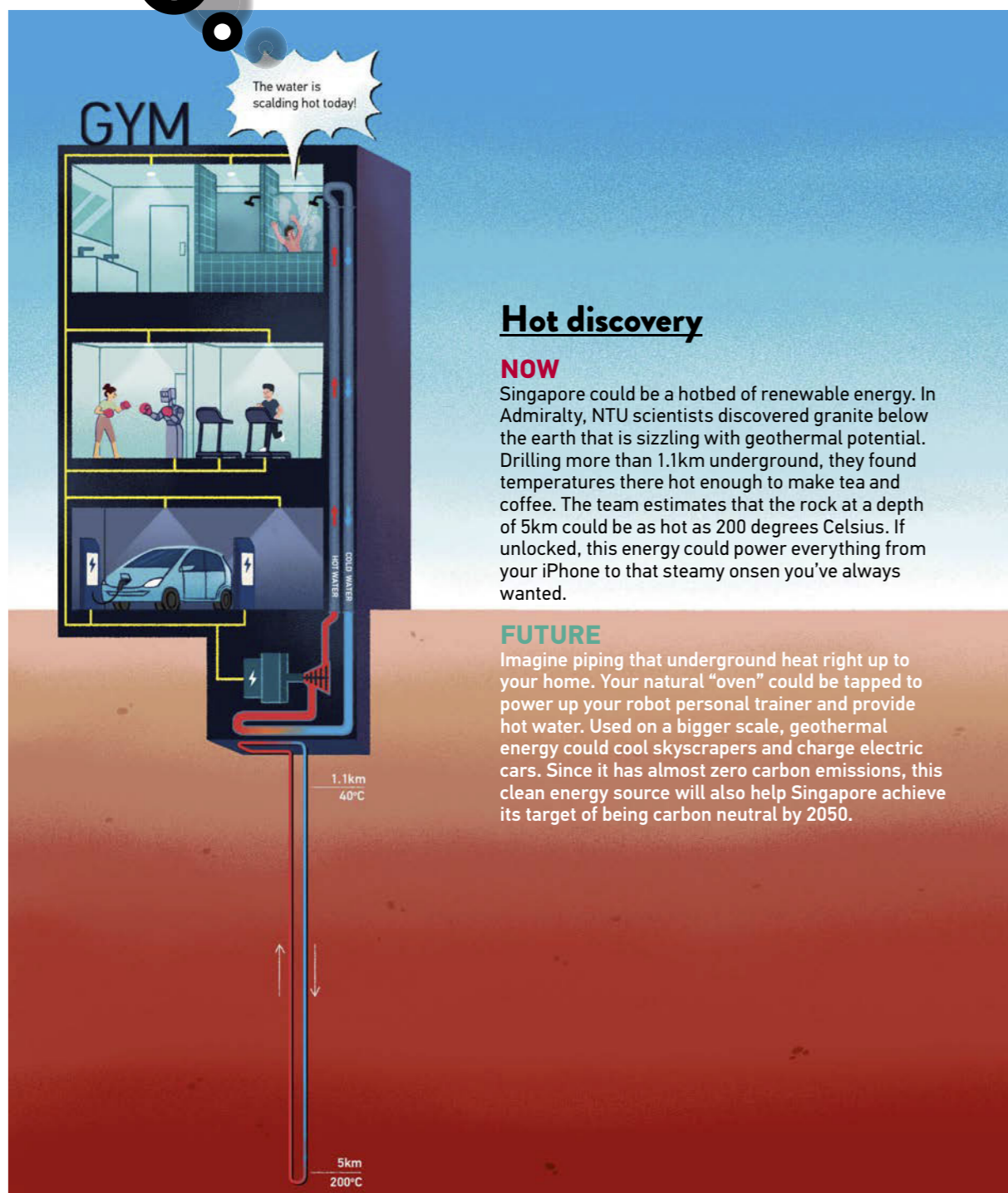
They will guide you like a parental figure, give career advice, and mentor you as you attempt to exist as best you can in the 21st century.

You'll feel bad asking them to write a last-minute reference letter for a job interview or Master's application, but they'll be so nice about it you start believing in the goodness of humanity once again.



# TOMORROWLAND

How made-in-NTU technologies are changing our future



## Hot discovery

### NOW

Singapore could be a hotbed of renewable energy. In Admiralty, NTU scientists discovered granite below the earth that is sizzling with geothermal potential. Drilling more than 1.1km underground, they found temperatures there hot enough to make tea and coffee. The team estimates that the rock at a depth of 5km could be as hot as 200 degrees Celsius. If unlocked, this energy could power everything from your iPhone to that steamy onsen you've always wanted.

### FUTURE

Imagine piping that underground heat right up to your home. Your natural "oven" could be tapped to power up your robot personal trainer and provide hot water. Used on a bigger scale, geothermal energy could cool skyscrapers and charge electric cars. Since it has almost zero carbon emissions, this clean energy source will also help Singapore achieve its target of being carbon neutral by 2050.

## Cabbage to cream

### NOW

Who knew that the forgotten kale in your fridge could one day become your next face mask? NTU scientists are mixing alchemy with agriculture, transforming kale waste into health supplements and beauty products. Right now, extracting phytochemicals, the protective compounds in plants, requires high temperatures and releases greenhouse gases that make our planet warmer. With NTU's new earth-friendly technique, beneficial antioxidants and lutein can be extracted from plants more efficiently.

### FUTURE

Whip up health and beauty products from your unconsumed greens with ease. In fact, agricultural waste from different plant parts, including fruits, can be turned into eco-friendly products that boost our health and looks while reducing our carbon footprint. A beautiful win-win.



HEY!

AR

SCAN THIS ILLUSTRATION to see how your leftovers can boost your skin

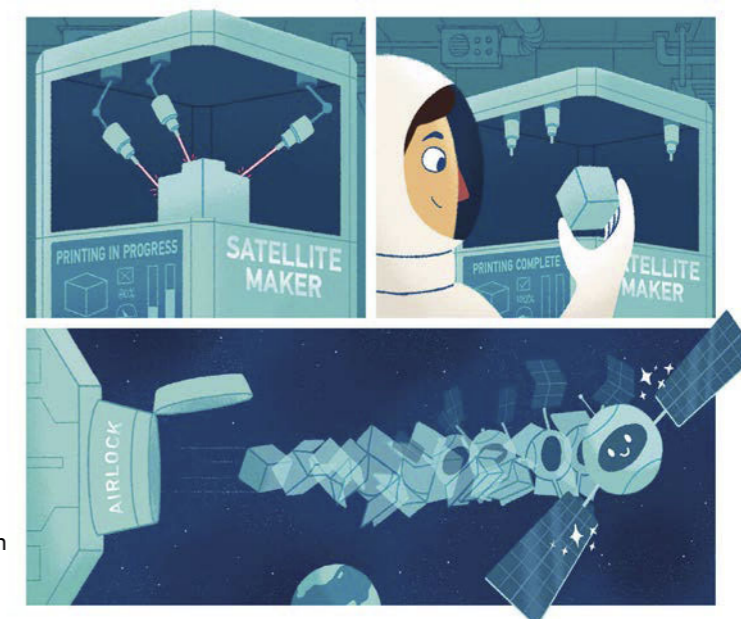
## Unfolding the future

### NOW

NTU scientists have not only 3D-printed satellite components, but incorporated shape-memory materials that "remember" and change their shape when exposed to heat or low temperatures. Of NTU's three latest satellites in space, one has 3D-printed parts and shape-changing materials, while the other two feature new solar tech and sensors for observing the sun and the Earth.

### FUTURE

Create a satellite from a 3D printer for any space mission you fancy, be it to snap photos of the moon or make a phone call from Mars. Using flexible electronics and shape-memory materials, scientists can create "cosmic origami". Picture a space-saving 3D-printed satellite that unfolds and deploys its solar panels and antennas on demand in space, making it possible for more instruments to be packed in the same rocket before launch.



# FYI!

## SCENE + HEARD

“Dr Surenate is especially patient and warm when teaching Thai. She readily shares her LINE number for any queries. In addition, she provides us with snacks and Thai tea, so we have a true authentic Thai experience. Her lessons are very engaging and she is really forthcoming.”



– Third-year humanities student Seng Zhi Yun’s appreciative words for her Thai language class lecturer, Dr Surenate Jaratjarungkiat (right). Zhi Yun’s full entry won her an 8D Contiki trip to Phuket, Krabi and Phi Phi Islands worth \$1,500 in our “inspiring NTU teacher” contest in the last issue of HEY!

### Disco tech

Do you have two left feet? Don’t worry, an NTU student might just be able to turn you into Fred Astaire or a K-pop idol. In collaboration with Microsoft, PhD student Tan Wang created a model using artificial intelligence to turn a still image of a person into a master of the dance floor. Named DisCo, the model was trained with around 700,000 generic images of people on TikTok, and about 350 dance videos to learn how people move while dancing.



HEY!  
 AR

SCAN THIS PHOTO  
 for a chance to win this groovy bestseller on BTS



### TECH TITAN IN THE MAKING

NTU undergraduate Zhou Xuanle has been named in the Singapore Computer Society’s SG 100 Women in Tech list that spotlights role models in the STEM sector. The mechanical engineering major was in the NTU team that won two awards at the Shell Eco-marathon last year and part of the NTU trio that finished second at JTC Corporation’s Future of Mobility Case Challenge earlier this year.



Xuanle (left) with her teammates at the 2022 Shell Eco-marathon.

### TOKYO DRIFT

Give it up for Cheng Jiaxiang! The PhD student’s research paper on a new deep learning-based method for prognostics and health management, authored with a team of industry experts and professors, took the Best Paper Award at an engineering conference in Tokyo.



HEY!  
 AR

SCAN THIS IMAGE  
 to unlock the door to the secret garden



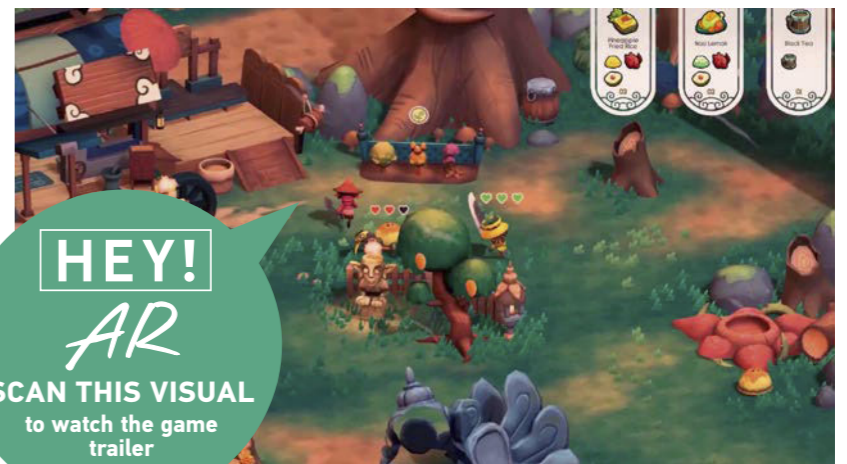
### AN ODE TO SINGAPORE’S HISTORY

Before emails and messaging apps, people would send postcards and letters in the mail. Imagine that! This slice of history is just one aspect of life for the pre-Internet generation (aka your mum and dad’s) that was showcased in an NTU Museum exhibition, Sites & Nature: A Collection of Remembering, which told the story of Singapore’s urban and natural development through artworks, artefacts, furniture, plants and materials.



### Recipe for victory

If you like gaming and food, you’ll want a bite of this. A duo from the School of Art, Design & Media designed a game around our two favourite guilty pleasures. Named SEDAP!, the two-player cooperative game involves gathering ingredients and cooking Southeast Asian staples such as nasi lemak, mango sticky rice and ondeh ondeh. The game clearly hit the spot with judges at the SEA Game Awards in Kuala Lumpur, where it won Best Student Game.



HEY!  
 AR  
 SCAN THIS VISUAL  
 to watch the game trailer

### SECRET GARDEN

A Supertree in Yunnan Garden? Yes, it’s reality – virtual reality. Inspired by HEY!’s refreshing use of augmented reality and a visit to NTU to find out more about the magazine, Canadian educator Dr Andre Plante created a virtual garden that shares Yunnan Garden’s unique layout, and contains landmarks such as the Merlion and a Supertree. Dr Plante, who has three decades of experience in higher education, uses the virtual space to familiarise students with design tools and principles.



There’s no humour in joking about mental health, even if it’s done in a light-hearted manner, says an NTU expert. Referencing a trend on TikTok where creators pose as mental health professionals and leave comments on videos like “See me in my office” and “Remember to take your prescribed medication”, the social psychology researcher says that these could trivialise mental health issues.

# WILD ABOUT SCIENCE

Singapore is a treasure trove of rare and exotic wildlife, and NTU students are braving the elements to better understand and conserve them

More than the generations that came before them, today's youths are passionate about protecting the environment. But some NTU students are taking it a step further, come rain or shine, early or late.

Instead of working in air-conditioned comfort, they are rolling up their sleeves and venturing into the wild to preserve nature's wonders.

PhD student Regine Tiong, for instance, is up in the wee hours of the morning at the beach, while most people are still curled up in bed.

There, she patiently waits beside

the sandy nests of critically endangered hawksbill turtles until the turtle hatchlings break through their shells and head for the sea.

She then collects the unhatched eggs and broken shells, and takes them back to her lab in NTU where she studies the genetic diversity of these turtles, as having good diversity indicates how they can better adapt and survive in different environments and against diseases.

The hope is that through these studies, scientists can figure out how to best safeguard these animals, whose numbers have fallen sharply in over a century.

**HEY!**  
*AR*  
SCAN THIS PHOTO to watch hawksbill hatchlings finding their feet in the world



"The project aims to help the conservation of the hawksbill turtle," says Regine. "It's fascinating that we find them nesting in Singapore. Beaches here are man-made or reclaimed, and are narrow with heavy human traffic. Yet they still choose to nest here. This gives us the opportunity to protect them."

For insect whisperer Calvin Leung, who studies ecologically important insects that live in wood called saproxylic insects, collecting the critters for research is "quite tedious", he says.

The PhD student goes into the

woods every week and a half to collect samples, taking segments of logs from the forest floor to bring back to the lab, where he dissects them and picks out insects like beetles, ants and termites. At the same time, he sets traps in the tree canopy to catch flying insects.

"When I started, many Singaporeans didn't even know we have turtles here. I think this project has created awareness about them. Being in NTU has also given me access to high-quality genomic data, strong sequencing teams and high-tech equipment that other turtle researchers might not have.

"Moving forward, I hope to collaborate with researchers around the world who do not have the same resources by helping them to sequence turtle DNA with samples they have collected."



But his luck with bugs runs out when it comes to the weather.

Almost every time he goes into the field, rain clouds won't be far behind. His "rain curse" means toughing it out in wet conditions is par for the course.

"It rained a lot in Hong Kong when I was doing fieldwork there. And when I was in Nepal in summer, I looked up and there was a snow cloud above. And some weeks ago, in Bukit Timah forest, it started raining, so I waited

it out and went back when the rain stopped and the clouds dispersed. But after setting just two traps, I heard thunder and then lightning struck a tree nearby, so I ran for my life," he laughs.

But it's all worth it – Calvin says the saproxylic ecosystem is an exciting one, with a single piece of log housing hundreds of critters.

"Some feed on wood, some are predators, some can be future pollinators, and others use it as a hotel. I want to know about their

**HEY!**  
*AR*  
SCAN THIS PHOTO to interact with this young trio



## TURTLE TALK

As a child, Regine Tiong dreamt of being a vet. Then turtles came into her life. She began her relationship with them as an undergraduate at NTU's Asian School of the Environment. Through a programme offered by Singapore's National Research Foundation, the animal lover spent a month in a research institution in Cyprus studying green turtles (main picture) and loggerhead turtles.

Watching turtles come up at night to lay their eggs, and finding and protecting the nests while waiting for the eggs to hatch, affirmed her mission to help turtles.

This led to her studying the genomics of the hawksbill turtle as her final-year project. After she graduated, she convinced Asst Prof Kim Hie Lim, her final-year project supervisor, that developing the hawksbill turtle's reference genome, and using it to study their population, was worth pursuing as a PhD project.

"She saw potential in this, the first such study at that time, which I'm very grateful for," says Regine, who now works with NParks to monitor turtle nests on beaches in East Coast Park, Sentosa and Sisters' Islands, including at the hatchery on Small Sister's Island.

Apart from contributing to science,

## BEETLE MANIA

Bugs don't bug Calvin Leung. The PhD student wants to cross paths with saproxylic insects – insects that live in wood.

Part of his research is finding out how the saproxylic community is recovering over time in younger forests in Singapore. To do this, he compares the diversity of saproxylic communities he collects from log samples in forests manually restored in the 1990s and secondary forests – forests assumed to be regrown after World War II – against those he gets from primary forests, which are more than 150 years old.

The budding taxonomist is almost certain he has discovered a new species of beetle too.

Says Calvin: "Earlier this year I found some stag beetle larvae. Usually these are quite huge. But the ones I collected were just about three millimetres long. They look like they're from a very primitive lineage of stag beetles, not like the ones we are familiar with. It must be a new species. We just have to go through some procedures to confirm it."

Another rare insect he has collected is the longhorn beetle. Coincidentally, within Singapore, this beetle has only been found in NTU, in the forests next to Nanyang Crescent.

“**TURTLE TRACKS ARE OFTEN THE FIRST SIGN OF TURTLES. IF YOU SEE SAND FLYING, THAT MIGHT BE A TURTLE DIGGING. AND LOOK OUT FOR SAND DOMES – TURTLES PUSH THE SAND BACK AND CREATE THESE LITTLE DOMES AFTER THEY HAVE NESTED.**”

– REGINE ON HOW TO SPOT A TURTLE NEST, WHICH SHOULD NOT BE INTERFERED WITH



“**SOME PEOPLE COLLECT INSECTS LIKE STAG BEETLES AND JEWEL BEETLES, BECAUSE THEY FIND THEM COOL. BUT THESE INSECTS ARE VALUED BASED ON THEIR APPEARANCE, NOT WHAT THEY ACTUALLY DO. SO I WANT TO DEMONSTRATE THEIR IMPORTANCE TO THE ECOSYSTEM AND SHOW THAT THEY ARE WORTH MORE THAN AS PETS.**”

– CALVIN ON WHAT MOTIVATED HIM TO STUDY SAPROXYLIC INSECTS



Calvin with a home-made flight interceptor to catch flying insects, such as longhorn beetles that prefer feeding on wood in the forest canopy.

diversity and try to quantify their ecosystem functions,” he says.

Like Calvin, PhD student Ong Xin Rui sets traps in and off the ground. However, her quarry is the dung beetle, never mind how good or bad they smell.

But beyond the bugs that create balls of dung from animal poop to chow down on later, Xin Rui often bumps into animals in the forest like wild boars and macaques.

Wild boars usually turn tail and flee, but macaques can be tricky to deal with and will sometimes mess with traps. She says it’s best to not engage with them, but sometimes sticky situations arise.

“Macaques in some areas are used to

being fed, so they will come up to you to look for food. Once, in Pulau Ubin, I was retrieving my pitfall traps and left a plastic bag filled with traps and dung on the ground. A macaque thought it had food and rushed over and grabbed the bag. But obviously it wasn’t food, so it got angry and started throwing everything around,” she recounts.

Despite these challenges, studying dung beetles is no monkey business for Xin Rui.

“Dung beetles provide key services in nutrient cycling and secondary seed dispersal. Hopefully, they can be recognised as a group that’s really important for forest ecosystems,” she says.

Xin Rui fills plastic cups with dung as bait for beetles. To get a trap into the canopy, she throws a weight with a rope over a branch, ties the free end of the rope to the trap, and hoists it up.



Photos: Marx Yim and The TEE Lab



**FROM DUNG TO DISCOVERY**

Ong Xin Rui is the cheerleader for an unsung hero of the forest – the dung beetle, which she calls “nature’s clean-up crew”.

“I use dung beetles as indicators of the mammal population in Singapore, as

well as other parts of Southeast Asia,” the PhD student adds. “Dung beetles get excrement from different kinds of animals as a source of food and for nesting purposes. So I collect them, bring them back to the lab and sequence the DNA of their gut contents to find out what animals can be found in the same forest.”



**HEY! AR**  
SCAN THIS PHOTO to watch Xin Rui set up a trap

**HEY! PEOPLE**  
Tan Zi Jie

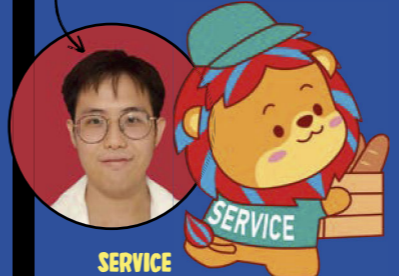
PRASHAM MEHTA AND SEO JIWOO  
School of Chemistry, Chemical Engineering & Biotechnology



**CORE VALUES IN ACTION**

The six NTU core values – Care, Respect, Integrity, Service, Partnership and Impact – serve as the compass for our community. But how can they steer our day-to-day actions and decisions? We find out from four students

JAVIER LEOW  
School of Electrical & Electronic Engineering



**SERVICE IN YOUR OWN WAY**  
“For some, service is donating to help those in need. For me, it’s putting in time and effort to create fundraising awareness.

That’s why I joined NTU’s Student Philanthropy Initiative, which champions fundraising campaigns and community service projects.

Remember, no one can give in the way you can, so your contribution is irreplaceable.”

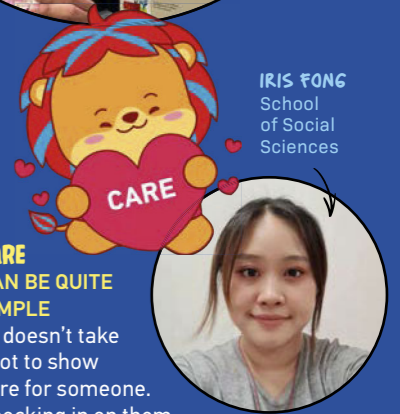
**RESPECT EVEN IF YOU DISAGREE**  
“We’re co-producers of Juxtaposition, a compilation of poems and illustrations. At first, it was obvious that we were very different, from our backgrounds to our personalities. We would sometimes have disagreements.

But we found that by engaging in discourse, we were able to better understand ourselves and each other. Embracing our differences and considering each other’s views are ways of showing respect for one another and everyone.

So, our book is a testament of how when we celebrate our mismatches, discuss opinions and open ourselves up to new thought processes, we can create beautiful art.”



IRIS FONG  
School of Social Sciences



**CARE CAN BE QUITE SIMPLE**  
“It doesn’t take a lot to show care for someone. Checking in on them, offering a safe space to share, can mean the world to someone who is struggling.

As a Peer Helper, I get to journey alongside fellow students going through a tough time. When I reach out to support them in their mental health and wellbeing, we connect in a special and genuine way.

I’m glad to know that I can offer them comfort and relief in their time of need.”



**HEY! AR**  
SCAN THIS PHOTO for your chance to win

**SIP SIP HOORAY**  
Win two of these exclusive OneNTU Core Values tumblers. (Pick any two and give one to a friend who embodies an NTU Core Value.)

# K-glass skin starts here

HEY!

AR

SCAN THIS PHOTO

for your chance to be one of 10 lucky winners of the **Duo Hydrogen** facial treatment from Chrysalis Spa worth \$380.

Terms and conditions apply.



Wish you could have luminous K-glass skin like Jisoo or IU? Now you can take a stab at rocking that radiant, super-hydrated look even in sweltering Singapore.

You just need to harness the power of science – molecular hydrogen, specifically. Enter Chrysalis' new **Duo Hydrogen** facial treatment with antioxidant properties.

K-glass skin is known for its smooth, flawless texture with intense hydration. The cutting-edge Korean technology behind Duo Hydrogen accomplishes that result in three steps.

First comes deep cleansing with the removal of dead skin cells and excess oil on your face. Then, super-fine hydrogen is used to tone your skin, removing harmful free radicals. This stimulates collagen production to improve your skin's elasticity.

Finally, a special serum replenishes moisture levels deep within your skin, locking in long-lasting hydration. This gentle yet powerful treatment is suitable for all skin types.

Say goodbye to dull, uneven and dehydrated skin and hello to a flawless, dewy look with this nourishing treat – no highlighter needed!

For a limited time only, HEY! readers can enjoy this treatment at an exclusive price of \$88 per session (U.P. \$380).

Visit [chrysalis.com.sg](https://chrysalis.com.sg) to start your journey toward beautiful, healthy skin.

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