Hey!

An Augmented Reality Magazine

Vol. 49 ~ Mar - May '22

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It all starts here

The inside scoop on the making of a great beginning
Nothing is worse for your skin than stress. Enlarged pores, angry pimples and dark post-acne scars can do a lot to wreck your confidence. And who’s got time to layer on dozens of skincare products when you’ve got after-school commitments and endless assignments?

At just $38, you can combat such skin problems with IMAGO Aesthetics’ Medical Spa Laser Facial. After just one session, you’ll notice that your skin looks brighter and more youthful, and you would have achieved this without any downtime or pain.

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To try out IMAGO Aesthetics’ Medical Spa Laser Facial, visit imagoaesthetic.com.sg or call 6481 1806.
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Scan this page for a chance to get your copy of Thirty Years of Momentum, 30 Perspectives, NTU’s 30th anniversary commemorative book.

FACTS OF NTU’S LIFE
Did you know?

... The Hive was conceptualised by a famous British designer to get you and your peers talking... in and out of class

... an NTU student was Singapore’s first track representative in 36 years at the 2012 Olympics

... Stefanie Sun signed her first singing contract while studying Business at NTU

... the Japanese architect who built the Hiroshima Peace Memorial Museum offered to design the campus for free

... the campus was the games village of the world’s first Youth Olympics

... NTU has had only four presidents in its history

... the first NTU Chairman served for 28 years

PLACE 3D OBJECTS IN YOUR ENVIRONMENT
Put a new spin on things

Drag your finger near the object to swivel it

Tap here to anchor the object to the ground

Tap here for a selfie view with the object

Touch the object and drag it to move it around

Tap here to reset the object’s starting position

Using two fingers, pinch or spread them to grow or shrink the object

Tap here to submit a contest entry

SCAN THIS VISUAL FACTS OF NTU’S LIFE
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Made for U

Here’s something for all of U. A new alumni magazine, simply titled U, has been launched. Through inspirational stories of alumni who have found success in their careers (and in life and love), you might see what the future holds for you too.

Services on tap

Want instant access to student services? Absolutely! A new student management system is being rolled out in stages, with an improved career planning service for final-year students and a streamlined enquiry and events booking service for prospective students already in place. The system will be fully operational later this year and will be accessible on the go on any online device and with the upcoming NTU Engage App. Stay tuned for more!

Life in plastic, is not fantastic

Plastic waste is a genuine threat. NTU scientists are working with experts around the region to understand the impact of plastic marine debris on Singapore and our neighbours. Though finding out the culprits are part of the study, the onus is on everyone to get on board and avoid polluting the ocean.

Smart new look

The library at the School of Art, Design & Media has received a glow up with new edtech-ready workspaces and smart upgrades. Fashioned for collaboration, The Playground features modular furniture and lighting that simulates the daylight cycle. NTU has also “hired” its first-ever smart mobile library assistant, Temi, who helps visitors find resources or reach its human counterparts.

To infinity and beyond

NTU is space-bound once more. Keeping a nanosatellite deployed by Elon Musk’s SpaceX in orbit is a thruster developed by NTU spin-off Aliena, whose technology was test-bedded in the NTU Satellite Research Centre. The startup is also tackling a new frontier in space with a fridge-sized microsatellite that can orbit the earth at a lower altitude than conventional microsatellites. This will make it possible for a Singapore-designed space camera to take sharp images of objects as small as a delivery parcel. Snap!
In a video that has been viewed over 148,000 times on TikTok, a food delivery rider humorously challenges an adorable blue box on wheels to a fight for encroaching on his territory. That blue box is the FoodBot. It is part of a fleet of self-driving food delivery robots developed by Renaissance Engineering Programme student Melvin Foo and his team at Whizz Mobility.

Since June 2020, the FoodBots have chalked up over 12,000 deliveries to hungry students on campus and others at the nearby CleanTech Park, an impressive feat for the five robots that were built from scratch in NTU.

"Most of the parts are 3D-printed and assembled on campus, and 80% of the technology, from algorithms to fleet management software, was developed by NTU undergrads in the maker labs provided to us right beneath our hall rooms," says Melvin.

The founder of Whizz Mobility has always been a whiz kid. At nine, he began tinkering with technology. By the time he was 18, he had made smartphone apps, remote-controlled airplanes, smart security cameras and Internet of Things devices. When he couldn’t find the necessary parts for a robot he was planning to make, he built his own 3D printer to make them, using recycled factory discards and after countless hours of online research.

That love of innovation led Melvin to join NTU’s premier engineering programme, as he was keen to flex his inventive muscles whilst getting a world-class education. Graduating with a Master of Science in Technology Management is a bonus, he adds.

Apart from the many engineering disciplines this programme offers, I liked that we could go abroad for a year. I wanted to visit and learn from tech hubs overseas and bring that knowledge back home. In addition, I was keen to take business modules as I wanted to run my own business.

The serial inventor went from strength to strength in his first two years as an undergrad, buoyed by his work on the Nanyang Venture XI, which competed in the Shell Eco-Marathon, an annual competition that challenges global student teams to design, build and drive ultra-energy-efficient vehicles.

"Working as part of an interdisciplinary and talented team of NTU students was an amazing experience. We all handled different aspects of the car, which became a source of pride and joy for us when everything came together in the end," recalls Melvin.

"The techniques I picked up from working on the car were used to great success when I was developing the FoodBot. If you think about it, a robot is not so different from a really small electric vehicle."
A quick and accurate COVID-19 test is what the world needs in the battle against the global coronavirus pandemic.

As an undergraduate in the CN Yang Scholars Programme, Leong Shi Xuan never dreamt that she would one day, as a PhD student, help invent a technology platform for quick detection of individuals infected with the virulent pathogen.

Together with her senior, Dr Phan Quang Gia Chuong, she is part of a 20-member team that in 2020 developed a COVID-19 breathalyser, which has been tested in Changi Airport and used at Parliament House by Prime Minister Lee Hsien Loong and other ministers.

The disposable breathalyser can accurately tell, literally with a single breath, if a person is infected with COVID-19, and in under two minutes.

Shi Xuan admits it takes special effort to breathe life into what might have started as a pipe dream, as is often the case in research.

In between regular classes as a chemistry undergrad and time spent in the laboratory, she also led an active campus life participating in contemporary dance practice and performances.

“Working on the breathalyser was a once-in-a-lifetime type of experience. You typically don’t get to work on research of this scale unless you are already part of the industry. I learnt a great deal about how research outcomes can be pushed for commercialisation.”

Like Shi Xuan, Dr Phan is a fellow dance enthusiast, whose love for research was further piqued when he won a scientific writing competition as a PhD student in NTU.

“One of my goals in life is to solve real-life problems using new technology. To do that, I have to start from scratch, beginning with research and ending with bringing the product to market. I want to break my own boundaries and do better each time,” says the multi-talented GC, as he’s better known in the world of contemporary dance practice and performances.

Medical student Parthasarathy Sreemathy is about to graduate after five years in NTU, and one of the many things the Lee Kong Chan School of Medicine undergrad looks back fondly on is her first year as a medical student.

“When I’m buried deep under mountains of lab work, you’ll hear me complaining about how challenging research is. But once I finish it, I feel this rush of adrenaline and immense sense of satisfaction and I can’t wait to do it all over again,” she says.

In between regular classes as a chemistry undergrad and time spent in the laboratory, she also led an active campus life participating in contemporary dance practice and performances.

“One of the things I had to do to experience was the insertion of a nasogastric tube through the nose and into the stomach. The discomfort of being on the receiving end of this helped me to develop empathy, something good doctors must have.”

Time has not diluted this experience for Sreemathy, who also dabbles in contemporary dance practice and performances. Like Shi Xuan, Dr Phan is a fellow dance enthusiast, whose love for research was further piqued when he won a scientific writing competition as a PhD student in NTU.

“One of the things I had to do was to learn about the in-depth medical knowledge doctors need to understand and communicate with patients. This was meant to help us understand what doctors have to go through,” she says.

“In 2019, she travelled to London to attend Imperial’s six-week internship programme, shadowing doctors at the hospital in a polyclinic and the hospital. This ‘hospital week’ was meant to help us understand what doctors have to go through,” Sreemathy says.

“I hope my research and the knowledge I uncover will spark future innovations and help society progress. That would be a dream come true!”

“This interactivity continues in the classroom. Sreemathy enjoys the team-based learning pedagogy unique to Lee Kong Chan School of Medicine students.

“We don’t have to sit in lecture halls. Instead, we sit in groups and learn from one another and our individual iPads depending on the topic our professor assigns us. Then, our professor will listen to our findings and correct us where necessary. I really like this style of learning as it is so much easier to retain information.”

In 2019, she travelled to Imperial College London, where she spent a week interacting with Imperial’s medical students and sitting in on their seminars and classes. She also shared her experience of performing physical examinations on patients to the first-year students there.
Internships allow students to test the waters in different industries so they can discover their calling.

After five internships at two consulting firms, two MNCs and a food delivery start-up, business undergrad Yeo Ray Gin knows what he wants to do in life.

“In school, I’ve always enjoyed modules where I can strategise and solve real-world problems, but I wasn’t sure if I would enjoy doing this as a full-time job. Now, I am sure,” he says.

The final-year Nanyang Business School student even took a six-month break from school just so he could spend more time at his last internship. The reward? Not only did it affirm his decision to go into management consulting, he also learnt a valuable lesson no textbook can teach.

He recalls an occasion where he had to handle a particularly tricky client meeting at McKinsey & Company, a management consulting firm:

“I didn’t know how to get to the root of the client’s problem, and neither did the client. We went back and forth on one point for hours as I tried to understand the needs.”

“Later, I realised that I should have probed more effectively by leading the discussion using industry examples and best practices to add clarity to the thought process. That’s a soft skill I’ll always take with me,” he adds.

This can-do attitude surely helped him score the Intern Impact Award during his two-month stint last year at Deloitte Singapore, where his job was to analyse potential business risks for IT systems.

“If you have a question for your boss, don’t sit around and wait for answers. Instead, take the initiative to share an educated guess to your own question. This demonstrates a good work ethic,” he offers as a tip.

Beyond learning how to be an exemplary employee, Ray Gin says he was able to connect with numerous experts in several industries, which could be the springboard to bigger and better things.

“I value the flexibility and opportunities I get at NTU to go on multiple internships. I’ve met so many great mentors and colleagues over these two years that I feel quite ready for my job hunt.”

Shao Yakun is one of those who believe two is better than one.

Pursuing a double degree in Computer Science and Business Analytics with a minor in Mathematical Sciences, she wanted something that provides the best of many worlds.

“I like the logical aspect of computer science, but I also wanted to hone my collaborative skills and be able to interact with as many people as possible. As both a business and computer science student, I have many opportunities to apply computer science knowledge to projects in the field of finance and vice versa. That gives me an edge as many jobs now require such versatility,” she says.

The third-year student admits she was sold on this course combination when she saw in the annual graduate employment survey findings that fresh graduates from this double degree programme topped the charts for their starting salaries.

But earning potential aside, she’s clearly already becoming the best version of herself. Yakun and her course mates have aced numerous case competitions, notably emerging champs in the Singapore leg of last year’s CFA Institute Research Challenge that required teams to research and report on a designated publicly traded company.

She also makes the best of every opportunity to test her cross-disciplinary skills in the classroom.

“In one class, I was able to apply machine learning techniques to analyse the stock market index, the S&P 500, which helped me make a smart recommendation on why certain stocks will do well,” she adds.

She believes that with her ability to synthesise expertise from computer science, business analytics and mathematical sciences – the backbone of many industries of the future – as well as the breadth of knowledge she receives as part of a well-rounded education, many options will be open to her.

“I can go into any field in the future. I can choose to have a career in investment banking, be a software engineer or go into data science. With the minor in mathematical sciences, I can also do quantitative finance if I wish to. I wouldn’t have so many options if I didn’t take an interdisciplinary degree at NTU.”
These communication undergrads took part in a global competition as a class project in integrated platform advertising and ended the term as world champions, with US$1,000 and US$500 in prize money.

For the six students, Nurfatin Rahim, Janessa Tan, Tiffany Chee, Abner Chong, Charmaine Goh and Sejal Bagaria, the odds were stacked against them as they were taking part in a United States-based competition dominated by American varsity teams.

However, the NTU students, who formed two teams of three students each, took home the first and second prize at the Digital Marketing Competition organised by weight loss company Wondr Health in December last year.

“We had little understanding of the consumer markets outside Singapore, but we used Reddit and Twitter to gather opinions and attitudes of American consumers on various weight loss programmes,” reveals Janessa, who is from the champion team. Her team also took home the Data Driven Award as the judges recognised the value of their well-researched pitch.

The win wouldn’t have been possible, say the undergrads, without the perks of an NTU education.

“Our class lecturer, Ms Wong Pei Wen, invited numerous top-level executives from Google and TikTok to show us the inner workings of their business, including how advertising buys actually work. In addition to these guest lecturers, we were also directly mentored by an associate director at a media buying agency,” recalls Charmaine.

“Nothing beats learning from the industry giants themselves. I can confidently say I picked up programmatic advertising from Google – and this is going to make my CV stand out,” adds Sejal.

The in-depth insights and direct mentorship made a huge difference to the way both teams crafted their campaign strategy for the competition, they reveal.

“We sent our ideas and presentations to the industry experts for their feedback, and I remember learning a lot from their comments and criticisms. Education doesn’t get more ‘real’ than that!” laughs Nurfatin.

More than just award-winning advice from top executives, the students also got an authentic look at advertising as a career, both the positives and downsides, says Abner.

“We had mentors from customer engagement firms, advertising research agencies, media buying companies and big tech. This breadth of knowledge gained may not even be possible with internships,” says Janessa.

Whatever your ambitions, make the leap from dream to reality.

NTU. It all starts here.
Hey, this is where you want to be

1. LEARN LIKE A PRO
As a student of the digital age, you’d appreciate being able to learn at your own pace. Go online with your laptops and tablets – such as the school-issued iPads for medical students – and pore through lectures and course content anywhere and anytime you want. Then thrash out ideas in groups in flipped classrooms – a great way to make friends too. Some of your lessons might incorporate virtual and augmented reality technology in smart classrooms. If you live in a hall, you can sign up for the many Residential Educational programmes at your doorstep, where you can pick up real-life skills like cooking, yoga and gardening.

2. START TO GROW YOUR INDUSTRY NETWORK
Here’s a cool prospect for you. You’ll be directly mentored by industry insiders through guest lectures and research projects. The likes of Dyson, Rolls-Royce and Alibaba have set up labs here and are eager to tap your creative mind. Here’s where you start building your career network too. NTU has over 200 industry collaborators, so you’ll be rubbing shoulders with accomplished C-suite executives in class and perhaps over lunch. Work-study programmes are also an option. Looking to join faculty-led research teams and earn a stipend in the process.

3. DIVE INTO RESEARCH AND BE ON TO THE NEXT BIG THING
Do you dream of creating vaccines for infectious diseases or transforming the fabric of the materials world? You need to get a foot in the industry first – unless you’re in NTU. From your freshman year, there will be plenty of avenues for you to immerse yourself in research that leaves an impact around the World, including the URECA programme where you join faculty-led research teams and earn a stipend in the process.

4. GO GLOBAL
Follow the footsteps of alumni who built careers around the world after a rewarding global student experience. Go overseas for an internship, an exchange programme, a community project or a field trip, or take an entrepreneurship course that puts you in a tech startup in an innovation hotspot in Asia, Europe or North America. Students on the Renaissance Engineering Programme, University Scholars Programme and CN Yang Scholars Programme get overseas exposure as a core part of their curriculum. And don’t hesitate to pad your CV by flying the NTU flag at international competitions.

5. MAKE SMART MOVES AT THE WORLD’S TOP YOUNG UNIVERSITY
Ranked the world’s best young university by Quacquarelli Symonds since 2014, NTU is the home of invention. It won’t take long to get a glimpse into the future, with the NTU Smart Campus acting as a testbed for futuristic urban tech like self-driving food delivery robots and autonomous electric buses. Here, innovation is everywhere – even in your halls. Take hackathons’ labs, design studios or research in your residential block give you the space and tools you need to turn concept to prototype. If you have a sound idea, you’ll even receive seed money to develop and test it out.

6. EXPERIENCE ONE OF THE WORLD’S MOST BEAUTIFUL CAMPUSES
NTU leads in both beauty and brains, having also made several lists of the World’s most photogenic universities. It’s hard to disagree. Find a sanctuary from stress as you take a waterfront stroll. From your hall room, look out to greenery or a graceful water feature and colourful wildlife. Buildings like The Hive and The Arc, as well as the grass-roofed School of Art, Design & Media, make frequent appearances on Instagram and YouTube. Though only students like you get the benefit of learning in their smart classrooms.

7. GET YOUR DREAM JOB AND PAY
It pays to be an NTU grad. Your interdisciplinary education and cross-disciplinary qualifications give you an edge in exciting jobs, including those that don’t yet exist. With help in career planning from their freshmen year, more than nine in 10 new grads secure jobs within six months of graduating. The latest graduate employment survey also shows that new grads earned more than previous cohorts, despite the pandemic, with alumni from Business & Computing, Medicine, Computer Science, Engineering & Economics, and Accountancy & Business among the highest paid.

GET AHEAD AT NTU
Hey, this is where you want to be

Hey! INSIDER
Derek Rodriguez - Vivian Lim
NTU
Where ideas are driven
Where journeys begin
Where innovation comes first

On the NTU smart campus, the next big thing could be just round the corner.

Undergraduate inventor Melvin Foo is the brains behind a fleet of self-driving delivery robots built in NTU and tested on the hilly terrain of its campus. A forerunner of future delivery services, these FoodBots have already clocked 12,000 trips to date.

Like Melvin, you too could create the next tech disruptor.

NTU. It all starts here.

Scan for details
www.ntu.edu.sg/admissions/ug

UNEXPECTED PANDEMIC JOYS

Like her peers, HEY! student writer Joelynn Tan found unexpected moments of appreciation and discovery during the pandemic.

COVID-19 upended life as we knew it, but it also inspired creativity and made room for change. I found time to volunteer, tutoring Primary 6 students who struggled with the conversion to online classes due to the pandemic. I also started exercising regularly, picked up painting, and even learned how to bake macarons.

Instead of dwelling on the things they were unable to do, other NTU students too focused on the silver lining.

The pandemic was isolating and slowed down the fast pace of my life. But it gave me a quiet and peaceful time to reflect on my interests and strengths. Unexpectedly, the social restrictions gave me space to consider what career path I want to pursue.

If not for COVID-19, I would not have been able to appreciate physicians and nurses as much as I do now. The pandemic has shown how dedicated our healthcare workers are and the ordeal that they are going through is certainly something that they should be commended for.

Since my school’s orientation camp was held virtually, I mustered up the courage to step up as a senior on the committee and make a difference. Although not held in person, the camp was an unforgettable experience as it gave me the chance to meet and connect with new people.

Not being able to travel led me to new discoveries about my home. The pandemic, as well as the SingapoRediscovers vouchers, gave me a chance to be a tourist in my own country!

The pandemic was isolating and slowed down the fast pace of my life. But it gave me a quiet and peaceful time to reflect on my interests and strengths. Unexpectedly, the social restrictions gave me space to consider what career path I want to pursue.

Barathram M
Medicine

Samantha Low
Sociology

Joelynn loves sunflowers and sunsets. When she is not writing, she is daydreaming about lying on the beach and looking at the stars.

Ng Jun Kai
Mechanical Engineering

Ng Ming Hui
Public Policy and Global Affairs

Vivian Lim
HEY! PEOPLE

Vivian Lim
People

Joelynn Tan
HEY! STUDENT WRITER

Joelynn is on a mission to encourage young people to pursue their passions and take on the world!

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for a chance to win this book and learn how to handle everything life throws your way.

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expected outcomes
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Put to rest the notion of the "starving artist". Today's digital artists are doing a roaring business, even as students.

MARC YAP
Art, design & media undergrad
Magnum opus to date: Dark Zodiac digital trading cards that sold out in the non-fungible token (NFT) marketplace, earning nearly $1.4 million in cryptocurrency

Tell us about your recent success in the NFT scene.
In my final year at the School of Art, Design & Media (ADM), a few of us came up with the idea of Chinese zodiac-themed digital trading cards as a way to enter the NFT market. We realised that the market is currently dominated by Western influences and that something with an Asian theme would probably stand out. Dark Zodiac features 3D monsters inspired by Chinese zodiac mythology and creatures from fantasy video games such as Dark Souls and The Witcher.

It was a very challenging two months as I had to churn out 60 3D models in just 60 days, so I was heartened and ecstatic when all 3,876 units of our work sold out in less than two hours even though we weren't an established brand.

You must be an expert in 3D art then?
Actually, no. Even though I've been an artist for 15 years, I had only done 2D artwork.
until recently, I was only introduced to 3D art in my second year in NTU when I took the Animation for Games module. So essentially, I only have about two years of experience in 3D art. Of course, credit must be given to my ADM lessons on fundamental art topics such as body proportions, set design, lighting and concept art, without which I don’t think I would have gotten this far.

Congrats! How has your life changed since your successful NFT debut? It buoyed me as an artist as I had been rejected by many of the companies I wanted to work for. Like many of the companies I wanted to work for. Like many artists out there, I fell into the trap of overestimating my value as a 2D artist when in fact the scope of such work is limited. Many companies right now rely heavily on 3D work. I felt like an underdog for many years because of that.

You mentioned that the Asian aspect of Dark Zodiac probably helped it stand out in the NFT market. Have you always been interested in the Chinese cultural scene? Dark Zodiac was sparked off by our project lead, Alan Seng, who used to work in a tech startup. Coincidentally, when he approached me, I was developing a Chinese-themed hack and slash game called Serpentine. Our interests lined up perfectly. To be honest, my Mandarin isn’t up to what I had been interested in the Chinese cultural scene? Dark Zodiac was sparked off by our project lead, Alan Seng, who used to work in a tech startup. Coincidentally, when he approached me, I was developing a Chinese-themed hack and slash game called Serpentine. Our interests lined up perfectly. To be honest, my Mandarin isn’t up to what I

and bright, so most of my customers posing for open commission slots asked to draw pictures of me. Of course! I’ve been actively posting on my art account @do_turtlee ever since.

As a business undergrad, how did you get into digital art? I started digital art two years ago, fresh out of Ngee Ann Polytechnic. One of my very first pieces had cute turtles. My characters still feature blob-like faces, oval eyes and round smiles. During the pandemic, I created illustrations of my friends and myself in graduation gowns. I decided to open commission slots for other graduating students. My art went viral and I got so many commissions that it felt almost like a full-time job. I’ve been actively posting on my art account @do_turtlee ever since.

Do you draw anything else besides turtles and turtle-like humans? Of course! I’ve been asked to draw pictures of my customers posing with their beloved pets. I have illustrated cats and dogs without turtle-like features. They have intricate details like soft fur so they look more realistic. I dislike lizards but was once commissioned to draw one, so I had to steel myself to look at a lizard for hours in order to fulfil the request. I’m just hoping I don’t get any commissions for cockroaches even though I’d still do my best to deliver!

How has your art style evolved over time? I started off wanting my artwork to be cute and bright, so most of my initial drawings are characterised by a black marker doodle style. Over time, my style has changed. At first glance, you might see simple oval shapes and dots, but take a second look and you’ll notice subtle details that make all the difference. The more complicated commissions usually involve background art or elaborate outfits.

Where can animal lovers find your artwork? I still accept commissions and I have since put my drawings on phone cases, greeting cards, framed prints, keychains, pet tags, physical stickers, postcards and tote bags. I’ve roughly sold about 3,000 pieces of these so far.

Critics have said the NFT scene is a bubble waiting to burst. What are your thoughts on this? There have been concerns about NFTs being a passing fad, but everything has its risks and rewards. After hearing Alan’s pitch to me about NFTs - each one is a record on a decentralised digital ledger of a unique piece of digital media - I realised this was a way to gain financial freedom as an artist. During my entire NFT journey, my body kicked itself awake every morning and I was fuelled by a sense of purpose unlike anything I had ever felt. I knew I wanted my life to change and I was willing to brave the risks. There’s a saying, fortune favours the brave, and this journey proves that.

Do you have any tips for artists interested in entering the NFT sphere? Never do it solely for the money. Investors and the community will be able to smell this in a second. As an artist, if wealth is your only objective, you’ll be a very miserable craftsman. Starting an NFT project is like getting a startup to succeed. Remember that it comes with its fair share of stress, capital investment, customer management and technology.

We hear you are donating a five-figure sum from the sale of your NFT art to your school, even before you have graduated. What motivated you to pay it forward? My time in ADM has actually been the best time of my education journey. In my four years here, I wake up happy daily knowing that I am pursuing my dreams. ADM provides a very coherent and supportive curriculum for us to choose our pathways and absorb different aspects of design and art. I want to help my talented juniors who aren’t given the best hand in life. A little help and support could be absolutely life-changing for them.

Starting an NFT project is like getting a startup to succeed. Remember that it comes with its fair share of stress, capital investment, customer management and technology. We hear you are donating a five-figure sum from the sale of your NFT art to your school, even before you have graduated. What motivated you to pay it forward? My time in ADM has actually been the best time of my education journey. In my four years here, I wake up happy daily knowing that I am pursuing my dreams. ADM provides a very coherent and supportive curriculum for us to choose our pathways and absorb different aspects of design and art. I want to help my talented juniors who aren’t given the best hand in life. A little help and support could be absolutely life-changing for them.

One of her more complex commissions.

A now sold-out Dark Zodiac digital trading card.
How did a biological sciences student like you get into digital art?

Digital art was something I picked up after my A Levels. When I had extra time on my hands, I certainly didn’t expect my Telegram sticker pack to be so popular! That led to some pleasant surprises, like being commissioned by Auntie Anne’s Singapore to design a limited-edition tote bag for their 25th anniversary. I’m glad to say the design has found its way onto the pretzel chain’s uniforms and other collateral!

I’ve also been working on some commissions for individuals and organisations and am in talks with brands on projects — fingers crossed on that!

So… what exactly is Mito?

He’s a blob! An alien blob that crashed his spaceship on earth to be exact. He used to have squiggly arms and legs and was longer, almost like a bean, but then I refined him by making him fatter, rounder, shorter and cuter. Some people think he’s a pea — and that’s cute too.

Is Mito stuck on earth forever? What’s next for him?

Could be! I’ve always been keen on expanding his backstory, so I produced a two-minute animated short in 2020 about Mito bumbling about a space station. I plan to release it this year after some final touch-ups. I’ve always dreamt of producing an animated series focused on his space adventures before he crashes to earth, my inspiration being TV series Final Space and The Mandalorian. Another angle I’m considering is showing how Mito struggles to adapt to Singapore. I think that would be hilarious and I’d love to combine Singaporean iconography with Mito.

Putting yourself in the shoes of Mito, how has being in NTU helped you navigate the world of digital art?

I was the Publicity Secretary for Hall 15 in 2020. Because I had full creative control over the hall’s publicity materials, merchandise and other collateral, I could dabble in different art styles and gain experience managing merchandise sales. Having a better understanding of the workflow from sourcing for suppliers to order fulfilment was super helpful during my first Mito merchandise launch last year.

We’ve met Mito. Now how can we get Mito?

I’m open for commissions and have been regularly producing an animated series focused on his space adventures before he crashes to earth, my inspiration being TV series Final Space and The Mandalorian. Another angle I’m considering is showing how Mito struggles to adapt to Singapore. I think that would be hilarious and I’d love to combine Singaporean iconography with Mito.

Have you considered entering the NFT market?

NFTs are still very new, so I prefer to err on the side of caution before plunging into it. That said, it seems like a great way for people to support me and the work I do, and even own part of my work. NFTs also have the potential to expand the reach of my art outside of Singapore and Asia, which is why I’ll consider selling my art on this platform in the future.

Some people say you can’t make money as an artist. How true is that?

I used to be very reliant on traditional mediums and I didn’t have access to or knowledge of digital tools and software, so it was tough to get commissions. But after picking up digital illustration, animation and graphic design, I found it much easier to tackle a variety of briefs and adopt different styles. That said, this may not be applicable to every artist out there — some may have very distinctive styles that make them unique and marketable. The ability to make money from art is mostly dependent on the artist’s skills, versatility and luck, amongst other factors.

What encouraged you to study at NTU when you were Freelancing as a graphic designer?

In polytechnic, I was gifted with more creative freedom and form connections with people.

Where can we buy your work?

Before the pandemic struck, my friends and I hawked our wares in physical art markets. I now sell my art online at @tradervans on Instagram. I am also open for commissions. The best thing about digital art is the huge possibilities it offers. For example, I have the flexibility to turn a still illustration into an animation. I can also instantly change colours. Digital art can also be easily shared with a wider audience.
NTU sent the first Singapore-built micro-satellite into space in 2011. We have since put nine satellites in orbit.

NTU’s social robots aren’t exactly human, but that hasn’t stopped them from having jobs. Nadine has worked at AIA Singapore and at the ArtScience Museum and EDGAR (pictured) hosted the 2017 National Day Parade.

In 20 years, those who lived through the era of the face mask will remember it well. But what will students of 2041 think of it?

The world’s top young university has much to celebrate as it marks its 30th anniversary since its inception as NTU in 1991.

Explore interactive displays with augmented reality at the exhibition.

Get up close with NTU-made race cars.

Engineering student Melvin Foo, creator of an autonomous delivery robot, one of the entries in the digital time capsule, introducing his invention to Minister for Education Mr Chan Chun Sing.
What better way to commemorate NTU’s 30th birthday than to celebrate its pioneering spirit and achievements in its relatively short history?

Since its inauguration in July 1991, NTU has built on its rich heritage and risen spectacularly from being a university serving Singapore’s manpower needs to a global research and education powerhouse that is also highly regarded for its architecture and beautiful campus.

A highlight of the celebration that you don’t want to miss is the Thirty Years of Momentum, 30 Perspectives Exhibition, which runs at the Nanyang Auditorium until June. It’s an interactive showcase of three decades of impactful innovation and achievements by the university community (worth checking out are a 3D-printed toilet and made-in-NTU race cars), along with personal insights of those who have been part of NTU’s growth.

At the public exhibition, you can also view the contents of the digital time capsule that was launched last September and sealed during the exhibition launch ceremony in December with the help of Education Minister Mr Chan Chun Sing, NTU Board Chair Prof Ling San and NTU President Prof Subra Suresh. He shared the stage as Su Guaning, Bertil Andersson and Subra Suresh traced the evolution of NTU milestones. Representing our lives and times, the digital time capsule will surely serve as an inspiration to future generations of NTU students when it is unearthed on NTU’s 50th birthday, One entry in the time capsule is a unique panel discussion between all four NTU Presidents past and present held last year. On this historic occasion, Profs Cham Tao Soon, Su Guaning, Bertil Andersson and Subra Suresh shared the stage as they traced the evolution of NTU and recounted their individual NTU journeys, revealing interesting tidbits such as the fact that NTU was almost situated near Changi.

Don’t miss the interactive 30th anniversary exhibition at the Nanyang Auditorium that runs until June.

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**HEY! TIPS**

### ZAP YOUR GERMS AWAY

Did you know that your phone collects more germs than a toilet seat? It’s a good idea to sanitise it regularly, especially in these times. An alternative to cleansing wipes and sprays are UV sanitisers. These high-tech contraptions disinfect your gear, from keys to your mouse, in minutes and come in portable shapes like wands and small boxes.

### SOUND SOLUTION TO UNWANTED NOISE

Don’t tangle with technology – get a good set of wireless earbuds like the JBL CLUB PRO+ TWS, which pairs immersive sound with seamless utility whether you’re using one or both earbuds. Need to listen in on a lecture? The canteen’s cacophony is no match for its adaptive noise-cancelling technology that shields you from unwanted sounds. Having a discussion is easy too with the earphone’s three microphones eliminating background noises like wind and chatter.

### CARRY SMART

Spec up your everyday carry at the NTU Smart Campus with these high-tech accessories

#### YOUR INTELLIGENT DRINK CADDY

It’s important to keep yourself hydrated when you’re out the whole day. If you need to be reminded to take a sip between study sessions, plump for a smart water bottle that tracks your water consumption and prompts you by lighting up when it’s time for a drink. Some can even sync to your phone and allow you to track the temperature of your drink.

#### TAP FOR HOT FOOD

Picture this: It’s lunchtime at The Hive and you’re in the zone, going through your slides with satisfying efficiency. Then you feel it, a rumbling in your tummy threatening to derail your momentum. You pull out your lunch box, hit a button, and turn back to your notes without missing a beat. In a few minutes, your food is warm and you’re ready to eat. With self-heating lunch boxes, you won’t need to waste precious time finding a microwave oven to have the luxury of a hot homemade meal. However, expect that the newfangled versions of these – that steam instead of just heat your food – won’t come cheap.
With perovskite, we can have solar cells that are 100 times thinner than human hair. These can be placed everywhere. First, we will put them on top of silicon solar panels to create tandem solar cells which are able to achieve much higher efficiency than each of the two technologies. But later, we can also place them on buildings, on roads and on consumer goods like backpacks and hats!

**DR ANNALISA BRUNO**
The expert in photovoltaics and optoelectronics was part of the NTU team that harnessed the potential of “wonder material” perovskite to worldwide acclaim in 2020

With the proper tools to communicate with plants, we hope to master plant language. We are just at the early stage of revealing the intelligence of plants. What magic power do plants possess that we aren’t aware of? How can we learn from plants and utilise their intelligence? We won’t know the answers until we engage in dialogue with plants.

**PROF CHEN XIAODONG**
The School of Materials Science & Engineering prof developed a device to communicate with plants using electric signals

A lack of intellectual humility can lead to an assumption of moral superiority, which is dangerous for society. When we enter discussions, we should always believe that we are right, but at the same time be open to the possibility that we are wrong.

**ASST PROF WALID ABDULLAH**
The School of Social Sciences prof hosts a podcast called “Teh Tarik with Walid” where he has candid conversations with politicians and political influencers

Human beings are meaning-seeking creatures and we long for connection. I believe storytelling is the key to making that connection. And while everyone has stories to tell, we can tell these stories with much greater authenticity and insight if they are told through art. We have found through tedious empirical research that art-based storytelling can heal us and unite us in our empathy, kindness, and compassion transcending the shadow of death, the sorrow of grief and the pandemic of loneliness.

**ASSOC PROF ANDY HO**
The School of Social Sciences prof pioneered psycho-socio-spiritual interventions for palliative care, including Mindful-Compassion Art Therapy and Family Dignity Intervention

Why does education feel so linear when life is not? By adding autonomy to your learning, you start adding personal things to your journey. You start adding your learning speed, your learning style, then you start making it your learning DNA.

**DEVI SAHNY**
Founder of tutoring startup Ascend Now, which creates personalised curricula based on students’ preferences
No escape-beam

NOW
Using a beam of laser light, scientists have managed to trap and move a single virus out of a community of thousands of other viruses. Their “light tweezers” can separate and isolate a single virus in just one minute, much faster than current methods that are tedious and lacking in precision. Laser-based virus-trapping technology makes it possible to study virus mutations such as the Delta or Omicron variants of COVID-19.

FUTURE
Scientists can go beyond understanding the average behaviour of virus populations. A laser-based virus manipulation chip that can isolate specific viruses or variants from a blood sample and pull them out for analysis might aid in vaccine development for future pandemics. Scientists would be able to quickly glean insights about viruses and the diseases they cause, which could lead to new ways to counter them.

Driving from home

NOW
A driverless road sweeper being trialled on Sentosa can be remotely controlled by an operator 20km away in the NTU campus. Using 5G mobile data and a full motion vehicle driving simulator, a qualified operator can drive the road sweeper from anywhere in Singapore.

FUTURE
Working from home could be an option for transport operators in future. Drivers could remotely pilot utility vehicles from the comfort of their bedrooms or office headquarters, reducing downtime between shift changes and improving the efficiency of their operations. This would also save on manpower, since one operator can easily monitor a fleet of autonomous vehicles remotely and manually take control in unforeseen circumstances.

Killer food wrap

NOW
NTU researchers have helped to create the world’s first smart antimicrobial food packaging that can kill harmful bacteria and fungi that sprout on fresh food. The waterproof packaging that looks like transparent film works by releasing bacteria-killing compounds made from natural ingredients, such as thyme oil and citric acid from fruits, when exposed to increased moisture or enzymes from bacteria such as E coli. Made from corn protein, the packaging is sustainable and may be a good alternative to petroleum-based plastics.

FUTURE
Using antimicrobial food packaging could double the shelf life of not just raw meat, fruits and vegetables but also ready-to-eat foods. That’s good news for us and for the environment, since the biodegradable packaging can be composted or broken down in soil or water after use and thus help cut down on landfill waste.
CHASE THE LIGHT, DAY TO NIGHT

NTU from dawn to dusk

Is this your light of passage?

Take the sunshine route.

Cottage or campus?

Golden state of mind.

Stay ahead of the curve.

Dorm dining 101: Cook up a storm.

Fur-miliar face at Hall 14.

Don’t lose your spark.

It’s easy to draw inspiration here.

Stellar find at The Hive.

Scan this photo to see the night fall.

Scan this drawing to see the making of a purr-fect moment.

Scan this photo.
NOT SURE WHICH CCA TO JOIN? LET YOUR PERSONALITY DECIDE

Choosing your CCA should be second nature. Just follow this fun guide by our HEY! student writer.

With over 120 clubs and societies to join on campus, choosing the right one may seem like a daunting task. The first step is to know thyself. Your answer may lie in personality tools such as the popular Myers-Briggs Type Indicator, which assigns you one of 16 personality types.

For an idea of what your Myers-Briggs type is, answer these questions to get your four-letter test result.

1. At social events, do you introduce yourself to new people (Extroverted) or mostly talk to the ones you already know (Introverted)?
2. Do you often ask what if (Intuition), or do you prefer to be grounded in reality (Sensing)?
3. When making big decisions, do you tend to follow your head (Thinking) or your heart (Feeling)?
4. Do you use organisational tools like schedules and lists (Judging), or keep things open-ended, spontaneous and flexible (Perceiving)?

1. INTJ
   You are a strategic and rational thinker who prefers to work alone. Make a calculated decision with the Board Gaming Society, or strategise your next move at the International Chess Club.

2. INTP
   Analytical and creative, you love thinking out of the box. Quench that thirst for knowledge and explore the next frontier with NTU’s space club (Students for the Exploration and Development of Space), or join the Da Vinci 3D Printing and RoboMasters Society, where the worlds of engineering and arts collide.

3. ENTP
   A great conversationalist, your mind is constantly ticking and you cannot resist playing the devil’s advocate sometimes. Flex your brain muscles and engage in constructive arguments with the Debate Society.

4. ENTJ
   Decisive and outspoken, you are able to think long term and love a challenge. Put your foresight to good use and lead the way by joining the NTU Students’ Union or any of its constituent clubs.

5. INFP
   You are imaginative, poetic and crave opportunities to express yourself. Let your creative juices flow in the Cultural Activities Club’s publications committee, or sign up to be a student writer for HEY!, NTU’s award-winning campus magazine.

6. ISFP
   Dedicated, warm and responsible, you give careful attention to practical details in your daily life. Your excellent analytical abilities and people skills should carry you well in academic clubs. Or what about joining the Peer Helping Programme?

7. ENFJ
   You have a genuine interest in people and take pride in guiding others to work together to improve themselves and their community. Pour your heart and soul into the Social Impact Catalyst society, whose socially driven projects and businesses may interest you.

8. ENFP
   Often the life of the party, you enjoy the social and emotional connections you make with others. Put your people skills to good use and communicate your thoughts at the Emcee Club or the Toastmasters Club.

9. ISTJ
   Practical, orderly and reliable, you complete tasks with accuracy and patience. Let these traits shine in roles that involve lots of data, such as serving in the Open Source Society, NTU’s “resident hacker” club that works with non-government organisations and the like.

10. ISFJ
    You are ever ready to explore and experience something new in your own quiet way. Discover a whole new world under the sea with the Scuba Diving Club, or immerse yourself in fascinating culture through the Japanese Appreciation Club.

11. ESTJ
    You like to create order in your life by establishing rules, structures and clear roles, a trait that makes you an effective manager. Take a stab at organising events with the NTU United Nations Students Association, where you can coordinate conferences or community programmes that impact the marginalised in society.

12. ESFJ
    You are sociable, popular and a strong team player who is a positive force. Lend your support through the Cheerleading Club, or work with your peers in any of NTU’s team sports clubs to victory.

13. ESTP
    Gregarious and energetic, you are great at making snap decisions and like to live in the moment. Enjoy the journey of starting a business with the Entrepreneurship Society and score some seed funding with your persuasive pitch.

14. ESFP
    Quite the “class clown”, all the world’s a stage for you, literally, and there’s never a dull moment with you. Put on your best performance and take your pick from NTU’s dazzling array of dance, music and performing clubs.

15. ENFP
    Often the life of the party, you enjoy the social and emotional connections you make with others. Put your people skills to good use and communicate your thoughts at the Emcee Club or the Toastmasters Club.

16. ENTP
    A great conversationalist, your mind is constantly ticking and you cannot resist playing the devil’s advocate sometimes. Flex your brain muscles and engage in constructive arguments with the Debate Society.

HEY! STUDENT WRITER
Joelynn loves sunflowers and sunsets. When she is not writing, she is daydreaming about lying on the beach and looking at the stars.
What is cryptocurrency?
Simply put, it is a new form of digital currency. Today, thousands of such virtual currencies exist, garnering as much hype as notoriety due to their speculative nature. The first ever cryptocurrency, Bitcoin, was developed by someone who went by the name of Satoshi Nakamoto.

To date, nobody knows who Nakamoto is. Some even suspect it is a group of individuals behind the pseudonym. Don’t we all have a good conspiracy theory?

The birth of cryptocurrency
It began with a simple, noble intention of decentralisation: removing banks as the middlemen for money transactions, and transferring power from big institutions to the people. Imagine being able to PayLah! your friend without the need for DBS Bank.

The concept was born in the wake of the 2008 financial crisis, when many could not withdraw their hard-earned savings and precious investments from the bank. Bitcoin, Nakamoto’s brainchild, sought to change that.

My older brother was the one who shared the technology and ideology behind Bitcoin with me. It was at the beginning of the pandemic. Prices were tanking across the markets, and he and his friend had bought Bitcoin during that massive dump. I decided to dip my toes into cryptocurrency as well.

How does it work?
To buy cryptocurrencies, you’ll need to open an account with a cryptocurrency exchange. There are apps for this in the App Store and Google Play. Once you have set up your exchange account and your crypto wallet (which is like a GrabPay wallet but for crypto), you can transfer real money to obtain cryptocurrencies such as Bitcoin, also known as “BTC,” and the most popular cryptocurrency right now.

Cryptocurrencies can be pretty daunting for the uninitiated, especially when it comes to learning about the utility of a coin and its potential. I did my research and watched many videos that helped to break down the information in an interesting manner — what the coins do, what problems they try to solve, and how new ones are different from their predecessors.

I have profited and seen my investment multiply a few times, but I must stress the importance of being prudent and doing your research. The process of buying cryptocurrencies, in hindsight, is scary easy.

Should I invest in cryptocurrency?
Unlike in countries like Russia, where a ban on the use and mining of cryptocurrencies has been proposed, Singapore adopts a “regulate, not ban” approach, which is good for investors.

At the same time, the Monetary Authority of Singapore has recently stepped in to warn of the highly risky and speculative nature of cryptocurrency, making it an unsuitable form of investment for the general public.

I would say that as with all new things, do your own research — before taking the plunge!

What can I buy with it?
While most people invest in cryptocurrencies as they would in other assets, you can use the currency overseas to buy goods and services, from air tickets to even a Starbucks cuppa. In El Salvador, Bitcoin is even considered legal tender!

Most of the items I have bought are crypto-related, such as a few non-fungible tokens for gaming and visuals for beautifying social media profile backgrounds. I’ve also bought illustrations in the NFT space related to Asian heritage and culture. In the real world, I know that some companies like RYDE accept Bitcoin as a payment method, but I haven’t tried it.

(Psst, for those wondering what non-fungible tokens, or NFTs for short, are, they are cryptocurrency assets that record the ownership of a digital file such as an image, video or text. Anyone can create, or “mint,” an NFT, and ownership of the token does not usually confer ownership of the underlying item.)

You may have read stories about people making millions off investing in cryptocurrency like Bitcoin. But just as easily, a bad investment could have you eating solely plain rice (or less) for quite some time.

The crazy price fluctuations of cryptocurrencies have clearly divided people around the world, much like the durian — you either love it, hate it or forget that it exists.

Whether you are baffled about Bitcoin, or curious about the crypto craze, here is your introduction to the controversial currency.
Scan this page using the NTU HEY! AR app on your mobile device to do a survey on HEY! magazine and stand to win a prize of your choice in our survey lucky draw. Good luck!

OVER 100 FABULOUS PRIZES

- Limited-edition NTU 30th anniversary tees
- JBL CLUB PRO+ TWS earbuds
- Garmin VenuSq – Music Edition
- Ofpomsandlentils preserved flower glass dome
- Bestselling titles from DefinitelyBooks
- Coffee Bean gift cards
- Power banks
- Laptop bags
- Facial treatments