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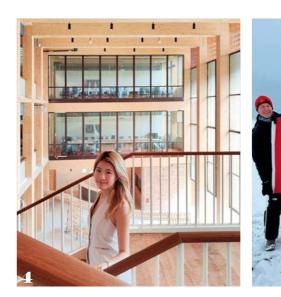
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30

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UNIVERSITY



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SINGAPORE

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SCAN THIS PAGE



**HEY!** readers

can enjoy the Al

MEDI-AESTHETIC GROUP

AMK Hub, #03-26, Singapore 569933



Inside a DODEN BADDER Welcome to Gai of the Nanyang We ask two stud

4

HEY! INSIDER

🖘 Derek Rodriguez

📑 Don Tan, Tan Hui Qin & Eileen Tan

🗇 Rahila Daud

Welcome to Gaia, the new home of the Nanyang Business School. We ask two student influencers from the school to show us their favourite spots in Asia's largest wooden building

Rewind back to August 2018. NTU had just unveiled its most ambitious sustainable construction yet – codenamed Academic Building South. We saw the artist's impressions and read the specs. We knew it was big and bold. And now, we know it is beautiful.

Of course, it's hardly been a secret. You've seen it from the outside as it has taken shape. You might even have voted when we polled for a name for the building. Recently, you've seen it from the inside too as you walked through it to get from The Hive to the (similarly wood-themed) bus stop. But oh boy, you've seen nothing yet.

### HEY! INSIDER



# A HINT OF HISTORY

Gaia stands on the site of the former Innovation Centre. But not all is lost because as a sustainable university, we have salvaged some of its bricks and used them in creating many of the walls here. In a retro nod to Gaia's past, the exposed bricks make a great backdrop for an #ootd shot.

## TIMBER ANATOMY

1 m

6

Gaia, named after the Greek goddess of the Earth, is the largest building made from mass-engineered timber in Asia, and the second such building on campus after The Wave, NTU's sports complex. Gaia's timber composition and how it was fabricated give it a much lower carbon footprint than traditional concrete buildings.



11111

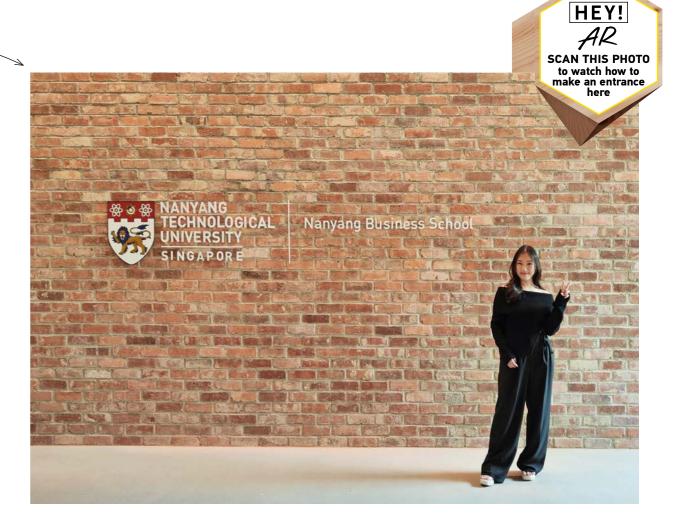
HEY!

AR

SCAN THIS VISUAL to hold - and explore

– Gaia in the palm of

your hand

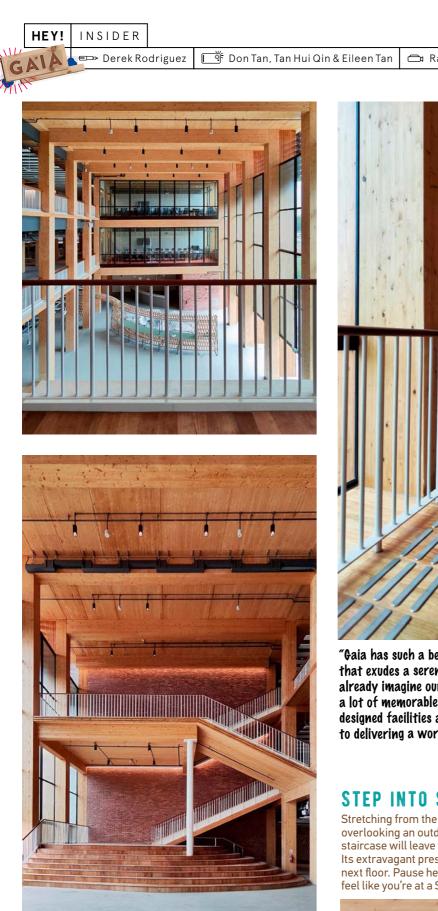




# WOOD YOU LIKE SOME Convenience?

Not to throw shade at Yunnan Garden but commuting to NTU is a little more exciting and comfortable with this new bus stop replacing the one at Yunnan Garden. Dressed in similar au naturel wood, it also offers a direct covered route to the South Spine and The Hive.







"Gaia has such a beautiful and timeless architecture that exudes a serene, natural atmosphere. I can already imagine our fellow NTU students creating a lot of memorable experiences here! The brilliantly designed facilities are a testament to NTU's dedication to delivering a world-class education."

- Final-year business student Chang Jit Wei

### **STEP INTO SCANDINAVIA**

Stretching from the first to the third storeys, and overlooking an outdoor amphitheatre, the bespoke grand staircase will leave you breathless for the right reasons. Its extravagant presence takes you a lot further than the next floor. Pause here for a moment and you might even feel like you're at a Scandinavian ski lodge, no cap.

### PICTURE Yourself Here

Here's an Instagrammable nook that overlooks the Yunnan Garden. Designed by a team of architects that includes Japanese maestro Toyo Ito, Gaia is full of spots like this one that bring the outside inside.





### FIRST CLASS FACILITIES

If you're a business school student, lucky you. From next semester, classrooms like this one are where you'll be ensconced – for interactive lessons and even log cabinstyle fireside chats. Gaia is equipped with a 190-seat auditorium, 12 lecture theatres, 13 seminar rooms, five meeting rooms and more than 70 small study rooms. Just try not to get distracted by the killer views on offer.



"I'm sure the new building will be adored by many. Its architectural design highlights the use of natural light, creating an almost Bali resort-esque feel that could offer a muchneeded escape from the daily school grind. I especially love the rooftop view overlooking The Hive and I highly recommend taking a few snaps up there! We are really fortunate to have this impressive building at the heart of our campus."

- Final-year business student Hailey Teo



# GAIA

### FRIEND ZONE

Friendships are what uni life is about and informal spaces like this are perfect for BFFs Hailey and Jit Wei, who have been pals since their junior college days, to catch up between classes. We hear this might be the site of a café in the future too.



# **LIQUID ASSETS**

Enveloped in what sounds like a burbling brook here, it literally feels like spring break. When those precious cool nights arrive, this is where you want to be – under the stars, surrounded by friends, and perhaps with a live performance in front of you.





SQUAD GOALS With 68

breakout rooms in the building, there's always a comfortable space for group projects, consultation with profs, or a study session with friends. Here's an early tip from us: Find one with a view of Yunnan Garden for a generous dose of natural light and lush views.

➡ Derek Rodriguez 📑 Don Tan, Tan Hui Qin & Eileen Tan



CONTEST TIME You've taken Hailey and Jit Wei's tour of Gaia. Now it's your turn to show us your favourite part of the building.



### DOWN TO EARTH

Gaia's eco Scandistyle minimalism runs in every corridor, on every floor. Extensive open areas, terraces and air wells ventilate the building naturally. Energysaving devices like LED lights, high-efficiency aircon chillers and heat-deflecting glass also help make Gaia the eighth building on campus, and one of only 16 in Singapore, to nab the Green Mark Platinum Zero Energy award, certifying that it consumes only as much energy as it produces.

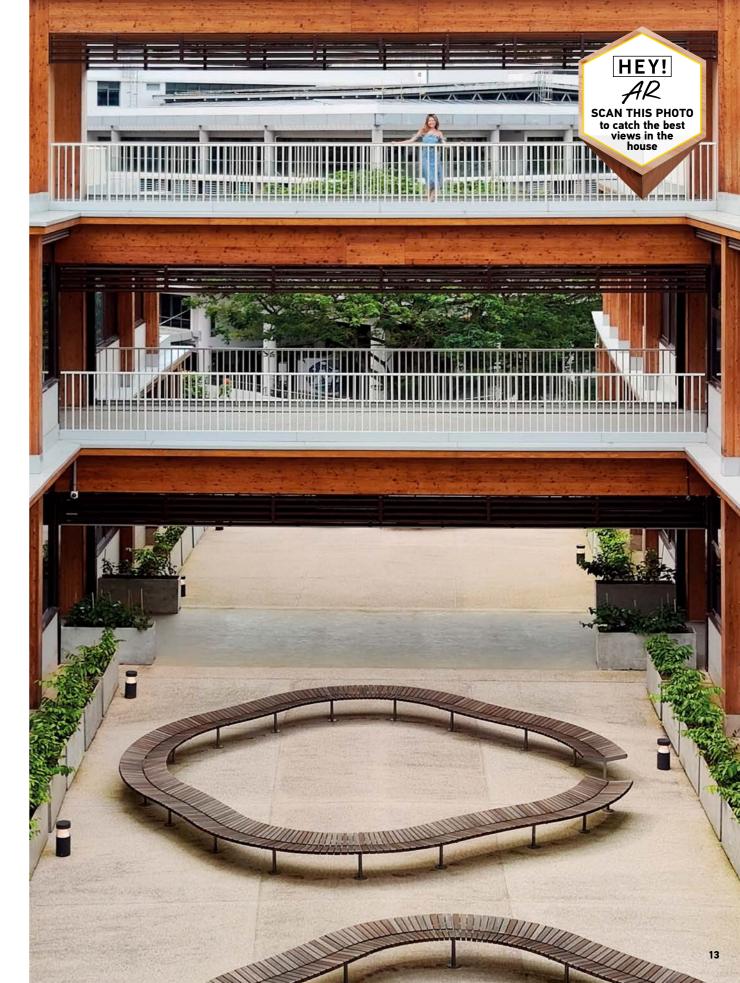


Outdoor terraces on this six-storey building provide breathtaking angles of the hood. On one end, you'll find The Hive, and on the other, panoramic views beyond the campus edge. Take in the sights yourself when Gaia opens,

**VIEWFINDER** 

and see which you prefer.





🖙 Derek Rodriguez 🖙 Don Tan 🗇 Rahila Daud

# QUESTIONS YOU SHOULD ASK BEFORE YOU CHOOSE A UNIVERSITY

Your varsity years will be some of the most transformative ones for you, and it begins with picking a university that fits your ambitions. But first, you need to ask the right questions

It all starts here.

# ARE OVERSEAS EXCHANGES ONLY FOR TOP STUDENTS?

University isn't just about getting a good GPA – it's about discovering who you really are, making connections and learning life skills. And there's no better way to do these than having a stint or two overseas. At NTU, every student, Dean's Lister or not, has the opportunity to go overseas. Exchange programmes aren't your only ticket overseas too. Language immersion programmes, internships and research stints abroad, and field trips to foreign places are other reasons why undergrads take flight. If your finances are tight, you can apply for financial assistance for these trips.

# AM I GUARANTEED A ROOM ON CAMPUS?

In NTU, freshmen are guaranteed a room on campus. You can also apply to stay together with a friend or a sibling of the same gender. Beat the morning blues by waking up just before your lectures, gain real independence as you carry out everyday activities like laundry or meal planning, and perhaps most importantly, learn to manage your own time as you schedule study time between commitments to hall CCAs and social traditions like supper nights. Through it all, you'll experience the joy of having buddies who will celebrate with you and help you navigate through any rough patches.

#### IF I WANT TO TAKE A MINOR OR A SECOND MAJOR, AM I RESTRICTED TO CHOICES IN MY COLLEGE?

HEY!

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SCAN THIS PHOTO

for front-row seats at an inter-hall

dance competition

Your minor and core major can be as different as chalk and cheese. In fact, NTU is where you can get a head start in diversifying your skill sets, since there are numerous avenues to take courses beyond your major in your college. Pair your engineering degree with a second major in data analytics, or your communication degree with a second major in business. Or boost your CV as a science graduate with an interdisciplinary minor in design and systems thinking or environmental humanities. With the wide range of second majors and minors in other colleges open to you, the possibilities are seemingly endless.

#### WHAT PERCENTAGE OF UNDERGRADUATES ACTUALLY DO PROFESSIONAL INTERNSHIPS?

All NTU undergraduates have to complete at least one internship as part of their curriculum. Whether with heavyweights such as Rolls-Royce and Dyson, or start-ups around the world, internships give vou an edge in employability. How do we know? Almost a third of NTU students receive permanent job offers at the end of their internship stints. You may not realise it yet, but other than experience in the working world, internships give you incredible insights into your passions and interests. Some students who do multiple internships have even used these stints to suss out their career path with conviction.

#### ARE NTU GRADUATES ABLE TO FIND JOBS?

NTU graduates are in demand. More than nine in 10 graduates from the Class of 2022 secured full-time jobs within four months of getting their degrees. They commanded higher pay too, with a mean gross monthly salary of \$4,443, an increase from \$4,000 in 2021. Graduates from NTU's Data Science and Artificial Intelligence programme and the Double Degree in Business and Computer Engineering/Science programme top the charts with mean starting salaries of \$6,647 and \$6,307 respectively.



It all starts here.

#### CAN I TAKE A YEAR OR TWO OFF IF I WANT TO PURSUE ANOTHER INTEREST?

Taking a gap year is a leap of faith that has paid off for some NTU students and grads, who have taken leaves of absence to start their own businesses, pursue sports competitively, take noncredit bearing internships, volunteer for social causes, or even to work in another country. NTU students are allowed to take up to three gap years over the course of their studies, although some who choose this route opt for just a semester's leave.

#### HOW ARE CLASSES CONDUCTED?

You pull out a chair, bring out your notes and join a lecture - in the comfort of your home or hall and at your own time. In the flipped classroom approach used in many NTU modules, you go through the course content before in-person classes, which involves finding solutions to problems in groups in smart classrooms and mega learning studios. Your classes too might incorporate virtual and augmented reality technology. If you're a hall resident, Residential Education gives you the chance to pick up skills at your halls, such as in app development, molecular gastronomy, fermenting beer and cheese, and even latin dance and social yoga.

#### WHERE CAN I GET GROCERIES AND MEALS?

With more than 100 food stalls and F&B outlets on campus, you'll never go hungry. The list of stalls and cafes is constantly being refreshed too – the latest chain to come to NTU is Domino's Pizza at Hall 1. And if you are preparing a meal for yourself or your hall mates, you can get fresh meats and vegetables from two fully-stocked supermarkets on campus, Prime Supermarket at the North Spine Plaza and Giant at Hall 2, which also has a 7-Eleven that's open round the clock.



# Combine

different perspectives in interdisciplinary teams to find a good solution.

# Jump-start your career with internships.

15

# <u>THE HARSH</u> TRUTH ABOUT ANTARCTICA

The frozen continent may seem distant to most of us, yet what happens there has implications on coastal regions worldwide. PhD student Tan Fangyi reflects on her week-long expedition to the remote land in February





Fangyi using a portable air sampling device to collect atmospheric samples from the cruise ship that she called home for seven days.



A penguin colony.

Melting of the Antarctic ice sheet poses the gravest threat to lowlying tropical islands such as Singapore.



Climate scientist Tan Fangyi is no stranger to the wonders of nature. Navigating around rocky beaches and diving underwater are all in a day's work for her.

But years of such outdoor escapades could not prepare the postdoctoral student for the landscape that greeted her in Antarctica.

"It took my breath away. I felt like I had landed on a whole different planet. All I could see around me was barren grey to greenish-grey bedrock," Fangyi says.

The youngest member of an NTU expedition team, Fangyi was on a mission to study the effects of climate change. With a bag full of equipment for air sampling in tow, she braved fierce winds and frigid temperatures.

It was the first time NTU had sent researchers to the remote land to observe first-hand the melting Antarctic ice sheet, which is causing sea levels to rise.

From their lodging of a large cruise ship, they set out daily on a small inflatable dinghy to collect data on microorganisms in the air.



HEY!

AR SCAN THIS VISUAL to experience the effects of global warming in 3D



- 0



**SCAN THIS PHOTO** for some seal-ebrity spotting in Antarctica



was the unblocked Investigating the air view of the pristine on land environment.

> "The ice sheets look exactly like those we see in schematics in papers. The scale of it was phenomenal," she says.

Fangyi says one

indelible memory

But as a geology student, Fangyi was also quick to notice worrying signs of the climate crisis. For example, she noticed heavily crevassed and fractured ice shelves, with the ice cliffs collaring their edges on the verge of collapse. The potential collapse of marine-based ice sheets in Antarctica poses uncertainties about future sea levels.

Recounting her trip, "The West Antarctic ice sheet alone has enough ice to raise sea levels by three to five metres, and that ice sheet is a lot bigger than what we saw in the Antarctic Peninsula," Fangyi explains.

> She adds: "Seeing the processes up close has left me with new perspectives and given me a renewed sense of purpose. Our research contributes to a better understanding of how the melting of ice sheets has impacted Singapore in the past, providing important context for future sea levels."

Samples taken during the trip are now in NTU's laboratories, where Fangyi and an interdisciplinary team of researchers are working to unravel the secrets of the frozen continent.

# HEY!

SCAN THIS VISUAL to stand to win this bestseller about how climate change has shaped civilisations across time and be inspired to do your part for the Earth

PETER FRANKOPAN THE EARTH RANSFORMED



Iceberg ahead!

#### YOUR Millennials may have been the first to be blessed with the bold, new world of EMOJIS emojis, but Gen Z created their own emoji vocabulary that no one saw coming Emojis may be ubiquitous today, but the same little icons that you punctuate your sentences with could mean something vastly different to someone from a different generation, like your parents or your prof. Here are some examples of Gen Z's ironic and slightly nuanced take on these modern-day hieroglyphs. (Psst, your profs might be reading this...)

#### Slightly smiling face

KNOW

You're on internship and tempted to communicate the way you normally do, with your Gen Z colleagues. Don't get too emoji-nal though. Here are some tips on emoji etiquette in the workplace.

гне

WORLD

WORK

#### 1. Stick to "safe" emojis

EMOJIS

OF

Certain emojis can be a little controversial and may mean different things to people of different ages. Steer clear of emojis that you think could be potentially offensive or misinterpreted.

#### 2. Pick the right context

What is the style of communication in your workplace? For instance emojis may belong more in a work chat online, than in an email An informal work culture may also lend itself to more liberal use of emojis.

3. Don't forget your words An emoji may be worth a dozen words, but it is still a symbol after all. It might be wiser to use emojis sparingly even if you think using them makes you more approachable. Show your boss how literate and professional you are with appropriate language and tone.



Not all smiles are born equal. The generic smiley face in the world of emojis, which used to be a universal symbol of joy, will no longer cut it for Gen Z, who see it more as an emoji to convey sarcasm or irony. Try 😊 or 😝 – the rosier the cheeks, the more genuine the emotion.

#### ••• Skull

It's common wisdom on TikTok that the 😖 laughing-crying emoji is for boomers. Instead, try the 💀 emoji, a popular replacement for conveying laughter. It's the visual version of the slang phrase "I'm dead" or "I'm dying", which signifies something is very funny.



Bookending your comments or words with the sparkle emoji puts emphasis on them, often ironically or sarcastically. This is known as a fairy comment. Some Gen Z-ers string it together with a bunch of other positive emoji, like stars, rainbows and fairies, and then pair them with something negative - another type of fairy comment. A variation uses a series of A, so your parents might think you're raving about something when you're actually being sarcastic.



real-world challenges, be mentored by renowned professors. ...

Cowboy On the face of it, the cowboy is a grinning emoji that suggests exuberance and cheerfulness. But for many in Gen Z, when someone uses this emoii, it means the sender is happy on the outside, but feeling sucky or "dead" inside. It originated during the pandemic

but is still popular today.

Heart

as a fairy comment.

A heart doesn't always mean "I

the classic 💗 heart emoji is

love you". When accompanied by a

anything but affection. For instance,

when paired with the word "no" or

any negative comment, the heart

emoji doesn't soften the rejection

vet sarcastic comment is known

or blow. In TikTok, this type of funny

rejection or a negative comment,

Eye, Lip, Eye

Why limit yourself to the usual open-mouthed emoji to express shock or surprise when you can do it with this collection of emojis? The face is meant to emulate wide eves and a slackened jaw, just like how you would typically respond to something shocking, outrageous, cringey or embarrassing.

HEY!	FYI				
=⊐> Derek Rodriguez			ß	+ 20003	Vivian Lim

FY

# **SCENE**

**HEARD** 

"As we approach the completion of our education iournev at NTU. let us leave behind a meaningful legacy by contributing to Class Gift 2023. This is an opportunity to give back to the community that has supported us, and to make a positive impact on future generations of NTU students. Our collective contribution, no matter the amount, can make a HEY! significant difference AR to the lives SCAN THIS PHOTO of our to be a part of juniors. araduation giving



- Class Gift 2023 student representative Ooi Yuan Phing (front row, second from right), a final-year economics student and bursary recipient

It all starts here.

# **PROPELLING TO VICTORY**

AR A team of aerospace engineering aces flew the NTU flag and took SCAN THIS VISUAL top spot in an aircraft design competition organised by the American to pilot the "Fireflighter' Institute of Aeronautics and Astronautics, the first time in recent years a university outside the US has emerged as champs. Under the wing of Dr Chow Wai Tuck, Class of 2022 grads Tang Wen Yue, Ler Puay Him, Tock Wenhui, Tamas Szecsenyi, Kenneth Neoh and Lee Cherng En wowed the judges with their entry, a purpose-built firefighting aircraft equipped with the latest technology for safe low-level flying, while still being economical to operate.



### A SCHOLARSHIP FOR THE TALENTED

Are you a performer, an athlete or an entrepreneur, or gifted in other ways? The new NTU Talent Scholarship might be for you. Set to be introduced next year, undergraduates who have demonstrated their success and passion beyond the classroom can apply for the scholarship, which offers benefits like coverage of tuition fees and allowances for living and accommodation, as well as a \$5,000 grant that can be used towards nurturing your talent. Keep your eye out for it!

Gain

career skills, learn from

top industry players.



6

HEY!



SCAN THIS PHOTO to obtain your bottle

Belonging



SCENTS OF BELONGING

We've captured NTU memories in photos and keepsakes, and now we've bottled them. Created by alumnus Jason Lee based on conversations with NTU students, faculty, staff and alumni, Scents of Belonging is a fragrance that takes us back to campus, wherever we are. Fresh citrus top notes are blended with soothing floral scents of rose and freesia, with base notes of wood and musk representing our modern infrastructure and heritage buildings. Smells good? Snag a bottle by joining any of the NTU giving programmes this year.

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# **GLOBAL CLOUT**

NTU's commitment to deepening interdisciplinary research to address humanity's grand challenges has been recognised as it placed seventh globally among research organisations most cited by the world's top innovators. The university is the only Singapore organisation in the top 10. Scientific intelligence firm Clarivate, which released the list in February, also recently named NTU as the Singapore institution with the largest number of influential scientists.



Oh deer, they're back! Sambar deer, that is. Believed to have disappeared from Singapore for decades, they are making a comeback, says research from scientists around the world, including in NTU. From interviews with wildlife experts and data from motion-activated cameras, the study found that the deer are likely descendants of those that escaped from the Singapore Zoo and other enclosures in the 1970s.

It all starts here.



### THE RAIN TREE MAKER

NTU's contributions to NPark's OneMillionTrees movement and the Green Nation Pledge continue with an initiative to replace about 30 of the campus's unhealthy rain trees and to plant more than 200 new ones, sponsored by a local plant nursery. The exercise has already commenced with more than 60 young rain trees put into the ground and complements the planting of 100 new trees late last year and another 100 saplings during NTU Service Week this year by the NTU community. Have you spotted these sprouts?



### **STUDENT IN** THE LIMELIGHT

Flying off to Los Angeles to attend an awards ceremony is exciting enough, but imagine what it would be like to have the movie you made screened during the event. This was what final-year media arts student Maggie Huang lived out as she was nominated for best student filmmaker at the inaugural Sony Future Filmmaker Awards. Way to go!

Grow

vour ideas and be the founder of the next start-up. 21



#### HEY! TIPS 🖙 Vivian Lim ≡⊐⇒ Eunice Sng

# HOW TO <u>MAKE</u> CHATGP1 YOUR SIDEKICK

The paragraph has already

ections are nee

LL J

been spelt correctly in

British English.

Enter any library and peer at the laptop screens of students writing their research papers and cramming for their exams. On some of the displays, you might find a familiar green logo emblazoned on one of the tabs.

As someone who has used ChatGPT, I appreciate its many practical uses. For example, I can use it to speed up my workflow, or to get inspiration when I feel weighed down by a mental block.

Here, I share some ways you can use the platform responsibly to help you navigate university life, not just academically, but also in other aspects, such as preparing for internships

or co-curricular activities (CCAs). A caveat though - the bot has been known to occasionally spew fiction instead of the facts you're expecting. Also, when it comes to using ChatGPT for school, it's best to follow the guidelines from your course instructors.

SCHOOL ASSIGNMENTS

#### USE CHATGPT TO...

#### ... PROOFREAD YOUR FINAL DRAFT

It is 2am. You have just finished churning out a 3,000-word essay on environmental degradation. The submission is at 9am and you are too exhausted to check the paper a final time before uploading it onto NTULearn.

Okay, you have an excuse to let ChatGPT comb through it for basic grammatical errors. The chatbot can clean up your work and rephrase awkward sentence structures to make the draft more ready for submission. And it corrects spelling errors.

Example prompt: "Check the spelling, grammar and sentence structure of this essay, using British English: [your text]"

#### ... SUGGEST THE STRUCTURE YOU NEED FOR A RESEARCH PAPER TO HELP YOU GET STARTED ON IT

Ever received a topic for your academic essay but have no idea where to begin? ChatGPT can speed up the legwork on days when you're particularly strapped for time, although you'll be doing yourself a favour by pondering the topic without help first. Key in the details of your paper's subject matter as the ChatGPT prompt to get a suggested outline.

An example is: "Topic: Singapore-Malaysia relations in the next 10 years based on the previous decade. Requirement: Outline for an essay. Language: Academic. Tone: Formal."

With the recommended structure, you'll have a better sense of what to research outside of the platform to fill up the gaps in your knowledge. This will give you a direction to work towards and tweak along the way as you get more familiar with the topic.

Remember that you should always add your own unique take, which will secure you a higher grade. So don't just stop at blindly following what the web platform proposes - ChatGPT is not a sentient thinker, unlike you.

CCA HELP

#### USE CHATGPT TO...

#### ... REPHRASE YOUR TEXT FOR A SPECIFIC PURPOSE. LIKE AN EMCEE SCRIPT

Not everyone has the best command of language. And even seasoned writers get stuck sometimes when thinking of alternative ways to convey an idea. Instead of ripping your hair out at the screen, use ChatGPT to get you past these roadblocks more quickly.

If you need to whip up an emcee script for your CCA's event, ChatGPT is your friendly sidekick. Come up with a rough draft of your main points, no matter how unpolished it may sound. After that, you can direct the chatbot to rewrite the whole text in the tone and style of your choice.

Example prompt: "My school club is putting up a charity concert at Sentosa to encourage staff and students from my school to donate money to animal shelters in Singapore. Rephrase this text for the event's emcee script: [your text]"

The output may not be perfect. But you can always edit the copy and put your own flourishes to the text once ChatGPT has completed the main revamp.

#### ... BRAINSTORM IDEAS FOR PHOTOGRAPHY SHOOTS

A • X

Any university event would not be complete without photography. With the end of pandemic restrictions, NTU events are back in full swing. Taking shots that capture your CCA's essence during their signature events is an important consideration.

ChatGPT can aid you in the brainstorming process. Key in the details of your shoot and ask for potential photo ideas for the event.

Example prompt: "What photos can I take for a solo dance performance by a male ballet dancer for an open house showcase?"

The answers can guide you on what to look out for while you are behind the viewfinder. While the list that ChatGPT generates is not exhaustive, it is a good starting point. You can also use this method if you are taking photography courses.

USE CHATGPT TO.

#### JOB HUNTING

... PREPARE FOR INTERNSHIP AND JOB INTERVIEWS

#### 

Going for interviews is part and parcel of any internship or job hunt. Going unprepared, without any idea of what interviewers are going to ask, can be a nerve-racking experience. Use ChatGPT to reduce some of that uncertainty.

Just describe the context of the interview and ask ChatGPT for likely questions. The AI chatbot will provide a response better tailored to your needs if you state your academic background and key in the detailed requirements of the role you're applying for.

Example prompt: "I am a chemistry major with a strong interest in sustainability and I am going for an interview for the following job: [list job title and full job requirements]. What are some interview guestions that could come up?"



SCAN THIS VISUAL to point out two factual errors in any of these ChatGPTgenerated responses and stand to be among 10 lucky winners of an **exclusive** Lvon T-shirt

HEY!

Each NTU building is

in the periodic table.

named after an elemer

EXPLORE 🖙 Vivian Lim

# **HEY! THANKS** FOR READING

HEY! received a warm reception when we made pit stops at Hwa Chong Institution and Yishun Innova Junior College back in March. So what did the students think of HEY!?

**HEY!** at Hwa Chong Institution...

> "After reading the magazine, am now more interested in NTU. I think the use of AR s very creative and certainly would be appealing to many others."

"It's my first time

with augmented

Hoe Lea-Anne, JC 1

"HEY! is very vibrant

and it's unique in

being a magazine that incorporates

augmented reality

features. I'm open

to studying at NTU

and am considering

the business

and economics

programme."

(centre)

Soh Zhao Heng, JC 1

reality."

reading a magazine

"The magazine is very attractive. I like the use of bright colours, which makes me want to read it."

Gwenaelle Wong, JC 1



"HEY!'s AR This is the first time I've seen to receive the card."

#### Jahnavi Lakshmi JC 1

"After reading the magazine, I've developed a much deeper interest in NTU. The magazine has shown me the vibrant culture of NTU and has made me want to become part of something as amazing as this."

Muhammad Nafil Bin Naseer, JC 2

### ... and at Yishun Innova **Junior College**

"The layout is

very nice. Love

the 3D rabbit!"

Branwen Goh. JC 1

"I think it's a verv interactive magazine, and I love how the magazine cover comes to life when you scan it with the AR app."

Snigdha Sengupta, JC I

Rey Lin, JC 2 (centre)

> features are cool. a magazine like this. I'm grateful Coffee Bean gift

Joy Nico, JC

"I find the FYI section

interesting. It lets me

with little news snippets

know more about NTU."

(right)

# HE READ HEY! AND WON

The winner of the hottest item in the HEY! readership survey lucky draw has been crowned. NTU student Anthony Chew collects his prize - a brand new Huawei notebook - and shares his thoughts on HEY!

0

It turns out that nabbing an exclusive NTU T-shirt during the HEY! roadshow in March was a mere appetiser for this NTU undergrad. As the grand prize winner of the 2023 HEY! readership survey lucky draw, Anthony has skipped away with a sponsored Huawei Matebook 16s worth more than \$2.200.

With over a thousand other participants picking the laptop as their preferred prize from among the set of over 100 freebies up for grabs, fortune really favoured the second-year School of Computer Science & Engineering student, who revealed that this was his first time winning a lucky draw. He also tells HEY! that he plans to replace his ageing laptop with this new one.

His first experience with HEY!'s augmented reality (AR) capabilities was during the roadshow.

"I most enjoyed the AR elements I could physically interact with, such as the 3D bunny," he says.

Fittingly, this led him down a rabbit hole.

"I like reading about campus life, students' achievements and especially food, and found

# 62

For a chance to win a Huawei smartwatch, flip to page 12. And keep up to date on HEY! roadshows with exclusive giveaways by following NTUsg socials HEY! to be a good source of information for these. So after reading this issue, I went to look for past issues on the HEY! website," he lets on.

HEY! | PEOPLE

=⊐→ Derek Rodriguez

0

One food article he relished was a story (published eight years ago!) in which food influencer and NTU alumna Miss Tam Chiak returned to campus for a food hunt.

And what would he like to see more of in HEY!, besides satisfying nosh?

"As a computer science student. I would like to see more on tech developments like blockchain and NFTs. And of course, more 3D AR objects."

Roger that and congratulations again, Anthony. We hope you enjoy your prize and the bumper crop of 3D AR elements in this issue.

0



HEY! INSIDER

📼 Lester Hio 🖾 Tan Hui Qin 🖾 Hillary Tan

# <u>A RUNNER'S</u> <u>GUIDE TO THE</u> <u>NTU CAMPUS</u>

Get both an endorphin rush and a fill of nature with these campus running routes recommended by Muhammad Syafiq Bin Haniss and Ngor Cheng En from the NTU Runners' Club

Long roads, running tracks and sheer biodiversity – NTU makes for a great location to squeeze some miles in while discovering a whole other side of campus not usually seen while rushing from class to class. Whether you're a casual runner looking to get a leg-up on your fitness goals, or a serious marathoner gunning for a new PB, NTU's campus has a route for your needs.

#### **ROUTE 1**

#### The quick workout route (3km)

A quick jog can shake off the day's fatigue, enhance your mood and even make you more creative. This flat, easy route near secondary forest is perfect for casual runners who want to squeeze in a quick run with minimal hills and enjoy NTU's proximity to nature.

### Tips:

28

- Get on the blue track, which provides a safe, easy route to follow, says final-year communication student Cheng En (right).

- You can speed up along Nanyang Crescent as there is almost no need for road crossings and it is not very high in human traffic.



HEY! AR

SCAN THIS PHOTO for Cheng En's running tips

HEY!

**SCAN THIS PHOTO** 

to get up to speed

on the scenic

route

**ROUTE 2** 

outdoor highlights.

full-body workout.

**ROUTE 3** 

hilly terrain.

Tips:

warm up.

Tips:

The scenic route (5km)

Take in the lush greenery and scenic sights

on this route through some of NTU's best

- At Yunnan Garden, go easy as you weave

structures. Rehydrate at the outdoor water

coolers and visit the fitness stations for a

- Be mindful of the changing terrain, from

stones and trails within the garden.

the pavement to the boardwalk to the paved

"King of the hills" route (7km)

Training for a 10k, marathon or some other

race? Looking to smash your PB and mix with

the greats? Put on your racing shoes and get

ready for a tough workout that covers NTU's

- The steepest inclines are from the southernmost

part of the campus past the School of Biological

Sciences (appropriately known as "Heartbreak

Hill" on Strava) and from The Hive towards the

University Health Service building. Give yourself ample time on the flatter parts of the route to

in between the greenery and heritage



### GENERAL RUNNING TIPS

Synchronise your breaths with your steps to avoid getting breathless.

Try a three-step breathing technique: one quick inhale through the nose, a short open mouth exhale and then a forceful blowing

exhale.

You know you're running at a comfortable pace when you can have a conversation while running.

Take shorter, quicker steps and land with your foot below your centre of gravity to better conserve energy.

# Relax your shoulders and swing your arms.

To truly enjoy running, choose a comfortable pace that does not get you panting so quickly. This way, you will find yourself more aware of your surroundings and will be able to enjoy and take in all the sights around you.



# IF IT'S GREEN, YOU BATT HE'S ON IT

Undergrad and serial innovator Carlo Charles is bringing an innovation from NTU's labs to life with his NTU allies. And that's just the tip of the iceberg for the man who's on a mission to save the Earth

The paper battery, a technology developed by NTU scientists, is a real game-changer and Carlo, an NTU undergrad, has plans to bring it to the world.

"When I first read about the paper batteries in an article, I couldn't sleep the whole night. I kept thinking about its potential. So I searched for the study's co-lead author Prof Fan Hongjin's email and invited him to lunch the next day. We met and talked for several hours and realised that our values and visions were very similar," says the second-year mechanical engineering student.

Soon after, the parties would sign a letter of intent, giving Carlo's sustainable tech start-up, Flint, the go-ahead to commercialise, license, produce and bring paper batteries to market. Applications of the technology are seemingly endless, with its flexible nature promising a paradigm shift in how electronic gadgets are designed and its ability to be safely degraded a huge improvement over current lithium-ion batteries that are difficult to recycle.

Paper batteries won't be Flint's first product. Carlo's company has already received over 1,000 orders for Flint Charge, a modular wireless charging system he built.

"We want to be as big as Apple and Google, for NTU and for Singapore. Then maybe I can be on the cover of HEY!," he laughs.

#### PITCHING TO THE BIG GUNS FOR CHANGE Carlo's commitment to

sustainability comes from what he experienced as a child in the Philippines before he moved to Singapore in his late teens and became a Singapore citizen.



Flint Charge, the company's debut offering of a modular snap-on powerbank, is now in production.

He says: "I grew up in a place where we suffered from natural disasters like typhoons and flash floods. We saw our friends' lives change overnight. They could be happy with their family one day and grieving the loss of someone or of their home the next. Can you imagine seeing your entire house fly away? It almost happened to us once too. We didn't have water and electricity for a week and even got robbed. As I got more mature, I started to question why this was happening. When I learnt it was because of climate change, which is ultimately our doing, it just made no sense to me. I wanted to make a change and that's when I started tinkering around."

He joined Makerspace Manila, where he learnt not only innovative thinking and human-centric design, but a valuable lesson from its CEO – to not let his young age or anything else limit him. His first creation at 14, an air purifier made from recycled materials, cemented his passion for invention. Another at 16, a tiny device designed to bring light to people without electricity with just an antenna, caught the attention of National Geographic magazine.

> Carlo's prototype for AquaLoop, an off-grid marine buoy that gathers and transmits relevant ocean data to the shore.

And a week before he enlisted in

National Service, he presented to

Google and the US Embassy plans

for a device to wirelessly study

the results of climate change in

oceans, securing their investments in it.

He has continued to pitch his ideas to the big guns, such as the United Nations and members of India's Prime Minister's office, opening doors for paper batteries to be tested in other countries.

#### CONNECTING WITH SUSTAINABILITY SOULMATES

At NTU, Carlo – and Flint – have an even bigger stage and more tools at his disposal to work towards his ambition of changing the world. He gets his hands dirty at the innovation labs on campus, such as Garage@EEE, the Mechanics of Materials Lab and labs at the School of Physical & Mathematical Sciences, and finds support through NTU faculty like Assoc Prof Andy Khong, Prof Ooi Kim Tiow and Assoc Prof David Fan.

The NTU DNA runs deep in Flint too. Its co-founder, Jeremy Wee, is a computer engineering graduate from NTU and its Chief Sustainability Officer is final-year materials science & engineering student Tan Shi Zhou, who is also a Global Sustainability Consultant at Razer and former President of Earthlink NTU. In Flint's pipeline are plans to use the NTU Smart Campus as a testbed for future products.

"We are looking at introducing compostable bags to replace plastic bags on campus. But first we are speaking with vendors and analysing the bag's life cycle to see if it is truly sustainable," says Shi Zhou, who was involved in the development of the National Day Parade (NDP) pack in 2021.

Carlo adds: "NTU really supports student start-ups and is a playground for entrepreneurs like us. In NTU, things move fast and I can test ideas here to see if they work."

Though Flint is in talks with companies that include Airbus and Shell, the first application of paper Flint's Chief Sustainability Officer, Shi Zhou (right), with prototypes of the 2021 NDP pack.



batteries might be in NTU. Flint is planning a small-scale deployment of paper batteries to store excess energy generated by solar panels in the day for use at night.

#### **STAYING ON COURSE**

Although much of the startup action happens outside of classrooms, NTU classes are also an integral part of the process.

Says Shi Zhou: "My minor in entrepreneurship has helped changed the way I think in terms of starting a business. I learnt what to take note of, how to engage stakeholders and how to ensure you can sustain your company. It also helps that the profs all have businesses and were able to share that experience with us. There are also useful modules in my core curriculum like environmental sustainability and materials, where I learnt how to analyse materials for their environmental impact, which is what I am doing now in Flint."

Carlo adds: "I can take an elective if I need help in a particular area. I needed help with marketing last semester so I took a marketing module, where I learnt from real industry professionals. If you ask me what the three big growth areas are, it's blockchain, artificial intelligence and sustainability, and the Interdisciplinary Collaborative Core modules cover all three. I feel it's essential for students to know about these – in fact, I probably put more time into them than my core modules." HEY! ΡΙΧ ∈⊐→ Kwok Pei Fang

# THE MOVES WE MAKE

There's never a dull moment as an NTU student, as these photos show. Keep putting on your best show and tagging #NTUsg

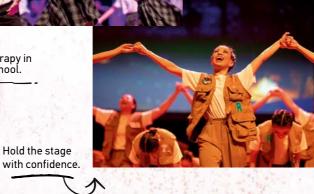


**JAR OF HEARTS** MEDLEE N I X 1 **1 MINUTE ARRANGEMENTS** SCAN THIS PHOTO



You can master the art.

Let our dreams take flight. 1





Dazzling moves at the NTU Hall Olympiad Closing Ceremony. 65

HEY! AR

**SCAN THIS PHOTO** for a great ice-capade

NTU's champion sharpshooters making waves again.

SCAN THIS PHOTO



Spar-tacular showing by NTU's taekwondo exponents.

SCAN THIS PHOTO

Never too skate to learn a new skill.



Great shot at the Inter-Hall Games.

> HEY! AR

**SCAN THIS PHOTO** for some smashing moments at this mini Olympics

> A dash of fun. 10

> > 33

med school.

**SCAN THIS PHOTO** 





#### NOW

Artificial skin that's even more sensitive than human skin is here. NTU researchers recently unveiled a new type of manmade skin that not only senses objects well but can identify items it hasn't touched yet. While human skin can tell the softness or hardness of an object and sense temperature and texture, this artificial skin made from conductive fabric goes beyond these sensory capabilities - it can identify what a material nearby is made of, whether it's metal, plastic or something else.

#### FUTURE

Artificial skin will be useful for robots and next-generation prosthetics in allowing automatons and human users to feel and sense their environment. For example, such artificial skin on a robotic finger could help factory robots to decipher which objects to pick up without having to grasp them. It could also be used as a supersensitive touchpad to control computer input or video games, or as a sensor to detect possible collisions with other objects.



### Robotic spa of the future

#### NOW

Robot masseuse EMMA is now being used in Traditional Chinese Medicine (TCM) clinics and hospitals to help relieve lower back discomfort in patients. Operated by a human therapist, it gives the perfect massage every time, with the help of artificial intelligence algorithms. Developed by NTU start-up AiTreat, the robot has an articulated arm with cameras and sensors and is smart enough to analyse and knead tense muscle knots to relieve tension.

#### FUTURE

Imagine a comfortable spa open 24 hours a day, seven days a week, that you can stroll into for a relaxing and affordable back massage any time you have a stiff back. Next-generation EMMAs can be remotely monitored and controlled, and enable wireless payment for their service. With safety features and the ability to deliver tailored treatments, they can alleviate the shortage of massage therapists faced by TCM clinics, hospitals and spas.

#### As easy as snapping

1, 2, 3

While flexible and stretchable electronics are not new, the glue used to join them together often easily gets out of shape or broken. To tackle this, NTU scientists developed a flexible and stretchy ribbonlike connector called the BIND, which can be used to join flexible electronics in mere seconds, much like how Lego blocks are snapped together. Not only can the BIND connector be stretched almost three times its length without affecting its functioning, it is 60 times tougher than conventional connectors.

#### **FUTURE**

With the BIND interface, glue and wire ribbons could be things of the past. Device makers can simply "plug and play" when assembling flexible electronics. This technology also opens a whole new world for hobbyists, who can now try their hand at making their own stretchy electronic devices such as monitoring bands for pets or smart bandages to monitor injury.



 HEY!
 PEOPLE

 ■□→ Foo Jie Ying

TOBY'S STONE LIONS AT BLOCKBUSTER SNEAKER EXHIBITION SNEAKERTOPIA FROM THE US.

# FROM STREET ART TO HIGH-STREET COLLABORATIONS

How did this young NTU alumnus go from painting murals for his final school project to drawing for the likes of Hugo Boss, Levi's and Asics in just three years?

As a child, Toby Tan would walk past temples and be intrigued by the intricately carved stone lions that sit outside.

That is the kind of authentic reaction that the NTU alumnus hopes his work as an urban visual artist can elicit in people.

"Seeing their instinctive reaction to my art, whether it's them taking an OOTD (outfit of the day) with my mural or sharing a pair of shoes I've designed on social media, is a big part of why I enjoy what I do," says Toby, who studied visual communication at the

HEY!

SCAN THIS PHOTO

for another

creative take

School of Art, Design & Media (ADM).

Under the moniker "tobyato", Toby has made a splash in Singapore's art scene. in the past three years as an emerging visual artist synonymous with street culture. He counts brands like Hugo Boss, Levi's, Asics and G-Shock among his clients.

His latest work is a pair of stone lion sculptures that come with sneaker details – think shoelaces and shoe tongues – designed for the Asia debut of the American blockbuster sneaker exhibition, Sneakertopia: Step Into Street Culture, at ArtScience Museum. STENCILLED ON IT.

EARLY CANVASES

PHOTO: YUSTI YUSOFF

MAKING HIS MARK IN THE HEART OF Orchard Road at 31300 Somerset

A HUGO BOSS LAPTOP

SLEEVE WITH TOBY'S DESIGN

PHOTO: MARINA BAY SAND

A sizeable portion of his work involves murals too. In fact, Toby first drew attention for his mammoth effort of repainting basketball courts with motifs that cast light on the history and culture of each neighbourhood.

It started out as a concept for his final-year project (FYP) at NTU, but the fine arts graduate wanted to push the envelope.

"I've always had this tendency to want to do more. I don't like to stagnate. I went from drawing on notebooks to drawing on computers, which then led me to murals," says the 28-year-old of his foray into mural art.

He adds that Assoc Prof Jesvin Yeo, his FYP supervisor, encouraged him to take his FYP further. "She made a huge impact on me creatively. She was honest with her feedback in the best ways and taught me how to focus on my strengths and sometimes let go of my weaknesses," he says.

#### A doodling Start

Toby's first few canvases as a child were his school worksheets and homework. He would doodle on them so much that teachers recognised his work not from his name, but from the drawings that covered the pages.

The doodling persisted as he continued his studies as a science student. It took a six-month stint as a part-time art teacher before he took the leap of faith and enrolled in ADM.

"Within the first few days of university, it became quite apparent that I had a lot to catch up on," says Toby, who did not know how to use the Adobe suite of designing tools. Having a later start than his peers pushed him to work harder to make up for lost time by taking up freelance projects to hone his skills.

That was how Toby landed his first mural gig in 2017. He had approached a now-defunct café at Beach Road with his idea for a mural, requesting for only the cost of the paints to be shared. The café gamely took up his offer.

Since then, Toby has gone on to enliven other spaces with his murals, from restaurants and offices to communal spaces and shophouses.

"The process of mural painting was mostly trial and error, with a bit of help from some friends in the industry who had mural painting experience," he says.

His largest – and favourite – mural project to date stretches across the wall of a two-storey shophouse at Tanjong Pagar, which used to be a fishing village. The mural shows two swordfish swimming in a pool of abstract waves – a homage to a Singapore Malay tale of the battle between local villagers and swordfish.

"Just translating the design from digital to wall took three weeks. But the difficulty of the project made me push myself to make it work," he says. "Looking back, it is my favourite work."

# MURALIST TURNED FASHION

While the attention from his finalyear project may have paved the way for exciting collaborations with big brands like Adidas and Shake Shack, Toby says his growth as a versatile urban visual artist was a much more gradual process.

"People often think there's a big break in my creative career, but it's more of a steady climb. I tried to understand what the industry is looking for and react to it. For instance, if something I have done is received well and I see there's potential to grow in this area, I double down on my efforts," he says.

Today, his Asian-inspired motifs cover the wildest of canvases, from watches to skateboards and sneakers. Sneaker collaborations



PHOTO: ENVISUALS.

HIS COLLABORATION WITH CASIO G-SHOCK FOR NATIONAL DAY.

with artists are "really rare" in our region, says Toby, a self-professed sneakerhead.

He also holds regular stencil parties with Uniqlo, where he gets to interact with members of the public while stencilling their tees or tote bags.

This versatility stems from his time in ADM, where conceptual thinking is emphasised. "This skillset is very translatable and essential regardless of the medium of the project. Whether it's a basketball court mural or shoe design, at the core of the creative process is a strong concept," he says.

That brands today are increasingly collaborating with local artists paints a picture of hope for those who are thinking of pursuing art as a career.

Citing his sneaker collaboration with Asics as an example, he says: "It's really nice when people appreciate the things you design enough to buy them. It represents a shift in local art. That gives me reason to keep going as an artist."

Toby was recently selected to mentor young creatives as an "industry OG" through a programme run by Regal F.C., a club under renowned whisky brand Chivas Regal.

"I am still very much that kid who likes to draw, but now I get a chance to draw many things for many people, and to grow with other artists. That is something I am grateful for," he says.



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