



ICT NEWSLETTER

9TH EDITION

**STUDENT
DEVELOPMENT**





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ORGANISED / SUPPORTED EVENTS & COMPETITIONS

Treadmill Marathon

The treadmill marathon is an annual charity run held by Ngee Ann Polytechnic with the aim of raising funds for NP's Student Aid Fund, and promoting a healthy and active lifestyle. The school of ICT boasted many sporty individuals who managed to accumulate a whopping total of 81 km. Through their combined efforts, ICT had achieved 3rd place and Ngee Ann was able to raise over \$2000 through this event.

AISIG Winning Logo entry

A group of Immersive media students from Ngee Ann Polytechnic won AISIG. When asked about the winning logo, Guo Ji Xuan who was one of the members of the winning team said:

"The Brain in our logo represents AI or Robots having a mind like us humans, whilst the Bulb signifies our thirst for constant innovation in our CCA.

The overall theme of our logo is to Innovate, Create and have FUN!"

RED Camp+

From the 16th to the 20th of November, ICT hosted its annual RED Camp+ event for O-level and ITE students to learn more about NP's courses & student life. The event featured the introduction of diplomas that ICT had to offer, a tour led by student leaders around the school's learning facilities, as well as livestreams on dream career pathways in ICT, course spotlight and sharings by staff, students and alumni

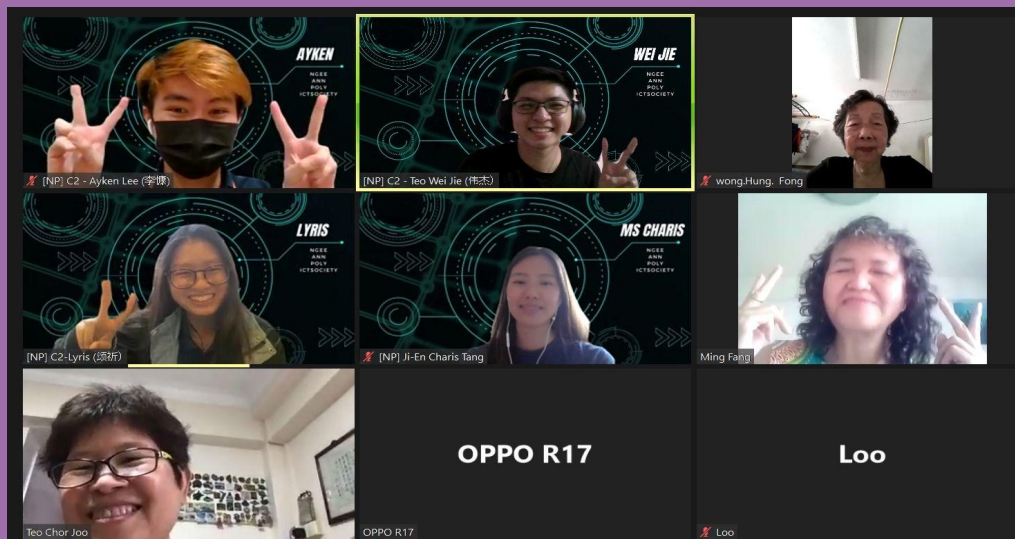
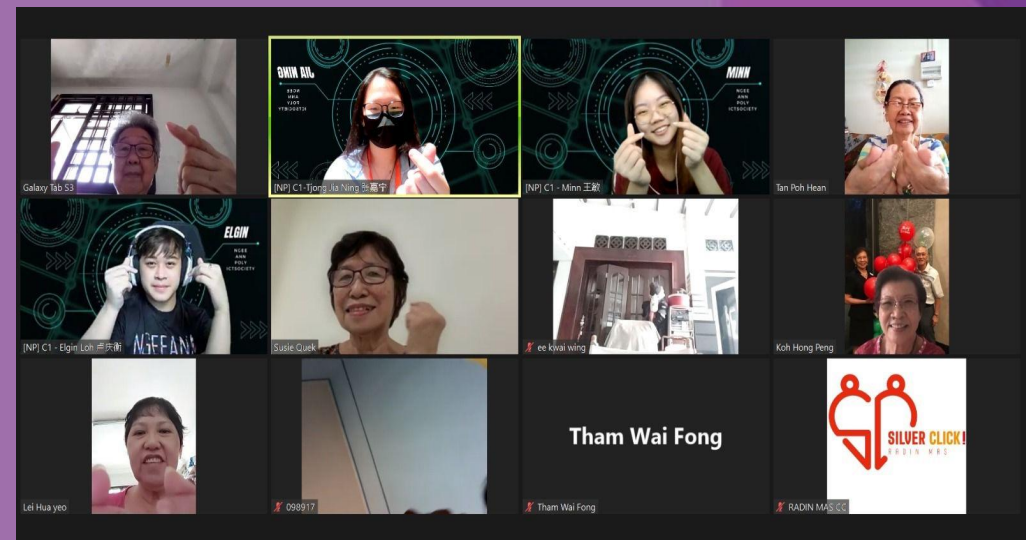




COMM-SERVE EVENTS

“The community service events held for the Silver Click program were very insightful for both parties. We shared with the elderly technical things like educating them on Cyber Safety, how to use the EZ-Link app to top up their cards, and also Singabus to view bus schedules! We not only taught them, but also had activities for them to try out after, and at the same time form a bond with them. They were very participative and were willing to ask questions — that our students eagerly helped with — which made our events very successful thus far.”

- Minn Ong



“ICT Society members taught elderly from Radin Mas CC TikTok on 28th December. It was an eventful sessions as the elderly enjoyed and learnt a lot about TikTok, an app commonly used by the younger generation. We recorded tutorial videos on how TikTok videos were curated and made use of the festive season to encourage them to create greeting videos for their family and friends.”

- Zen Koh



SIG ACTIVITIES



AMPHIBI STUDIO

Game Nights

Game nights are held biweekly on Saturdays in the amphibi studio discord server. Typically starting at 7:30pm giving members ample time after dinner to get ready to for sessions.

As we are all at home, we play games that can include as many people as possible. Usually, these include party games such as The Jackbox Party Pack or game that include many people such as among us.

During the game nights, we encourage everyone to have as much fun as possible, hence usually playing party games.

This is also a time for us to recommend games to each other that we may have liked. It is a bonding session where members come together to have fun and blow off some steam after weeks of school. We open game nights to all people who are down to have fun and play games. We want to provide a space for people to relax and enjoy themselves, while also introducing new games to members. We want to spread the joy of playing games with a community of like-minded people, and in Amphibi, game nights are open like-minded people.



Exco Bonding

The bonding session was held after the new exco took over on discord. As we did not have time to meet up in person, we decided to have a dinner together.

The bonding session to strengthen existing bonds within the exco so that we all can work better together. We played team building games and had a discussion on how we would like to proceed with the SIG.

The event was primarily to communicate to each other how we want to continue doing our sessions and what we would like to see from the SIG. we expressed our opinions and discussed our different views, coming to a common understanding on how we would like the SIG to be run.



GENESIS

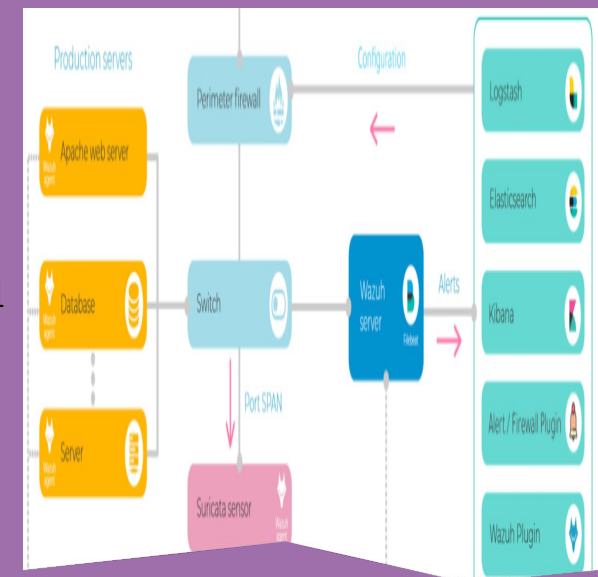


Project Development 1, WoCAT v3

Talented students were invited to assist in the re-configuration of WoCAT v3 platform for training pen-testing. New members will be invited to join to continue and contribute to the project as CCA.

Project Development 2, CiTaDel v1.1

Senior from previous capstone projects had innovated a Threats Detection System. The system can be further developed into an SIEM (Security Information and Events Management System). It is currently being selected as a showcase to students and visitors to introduce the SIEM concept. New members are welcome to join and contribute to the project as a form of CCA.



Project Development 3, Zurial v2

This is a follow-up project of a Capstone Project where Zurial and his teammates have completed a prototype to detect attacks on the system house in WoCAT system. New members will be invited to join and contribute to the project.



Open House Demo

GENESIS teamed up with NULL Sec to demonstrate to the visitors on how an attacker could penetrate into a PC using a Malware.



ORION



Live Streaming - “PATHWAYS TO A DREAM JOB IN INFOCOMM TECHNOLOGY”

ORION production team went onsite to Danamic studio to assist in ICT’s first live streaming session featuring our deputy director, Chang Bin Haw and Salesforce vice president, William Sim. Our panelists shared how our ICT students are equipped with industry-ready skills that enabled them to secure full-time jobs at multi-national companies such as 3M and Salesforce.

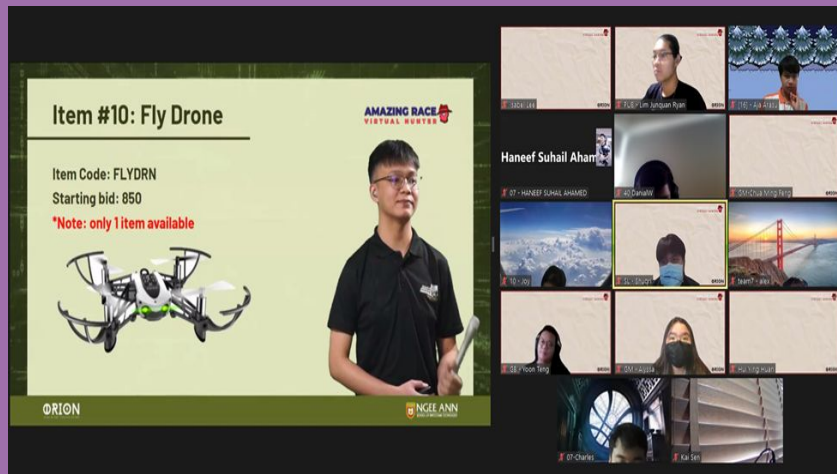
Open House Student Development Booth

In support of the Student Development Booth during Open House 2022, ORION attempted to present a holistic view of the ICT students’ life during their 3 years journey with us. A SIGs cum ICT society website was developed and featured interviews with each of the presidents to share the activities that they hosted and executed. By joining ICT, our students are provided with academic knowledge and skills such as leadership, communications, presentation, project management etc, making them all-rounder individuals.



Amazing Race

In March, ORION conceptualised and successfully executed our annual Amazing Race that introduces secondary school students to our ICT courses through challenging and exciting games and activities. Partnering with Salesforce, participants were introduced to the gamification platform Trailhead where they had hands-on experience completing modules and earning industry recognised badges. The finale for the event was a bidding segment that gave all participants a chance to bid for attractive prizes of their choice. Participants bid enthusiastically during the bidding as our Auctioneer Wai Lun announced the prizes!



ORION Photoshoot

To build up a library of publicity materials for ICT social media, our ORION publicity team held a photoshoot and filming session during the semester break. It was also an opportunity to train up the new members on the production and generation of social media content. Members also forged new friendships and strengthen existing ones as they capture memorable moments spent with each other.





PVSIG

Teachers Appreciation Video

Due to the COVID restrictions, PVSIG was posed with a new challenge in October semester 2021, to film a video virtually for Staff Appreciation Day 2021. The different classes were split into small teams and asked to record a session giving their best wishes to the teachers and staff in ICT. PVSIG then collected these clips, stitched them up using Premiere Pro and voila, a cute and engaging video was created for Staff Appreciation Day! This experience taught us how to come together and come out with innovative solutions in times of challenges.





THE DOT

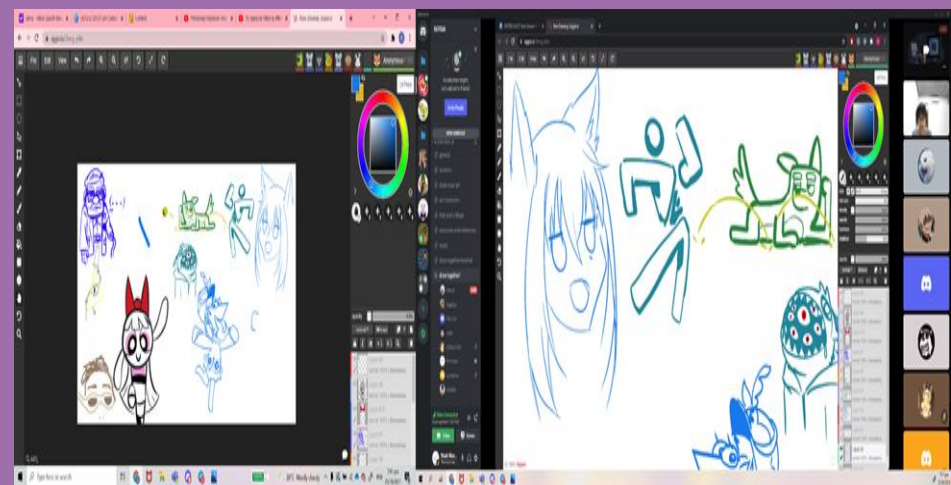
Immersive Media renaming contest via Google Form

Students from School of ICT have this opportunity to have their ideas to be part of the school by helping to rename Ngee Ann blk 27 level 4, previously known as Immersive Labs.



Introduction via Discord

Members get to know more about Dot SIG including the EXCO and the fundamentals of Shapes. The members then engage with a drawing period.



Project Genesis #1 & #2

Members joined in the new drawing world-building project, with the first theme being Steampunk, and the second theme being Mysterious Jungle.



Collaboration with NDP Pack 22

In collaboration with NDP Pack 22 Team, Dot SIG helmed a project for NDP 22 bags and fans.

Members of Dot SIG and other ICT students helped to digitize 24 artworks and do artwork enhancements for printing on NDP bags and fans.

Gartic-Phone

Members have joined in the game Garticphone, playing in different modes such as complement, normal and Secret.



NULLSEC

Workshops

NullSec hosted more workshops on varying topics this year in line with aspirations to engage more members. We managed to attain our goal of 2 workshops a month whilst maintaining the quality and interactivity of these sessions. Our workshops covered everything from disk and network forensics to safely executing potentially malicious software for analysis through containerisation techniques and python's usage for CTF competitions.

LNC (Lag And Crash) 2022

LNC is an annual Capture the Flag event organised by the 5 Polytechnics: Ngee Ann Polytechnic, Singapore Polytechnic, Nanyang Polytechnic, Temasek Polytechnic and Republic Polytechnic. This event was powered by Cyber Youth Singapore and supported by Div0, providing us with the tools and advice to make this event a success.

Students of all backgrounds joined in the fun this year from various JCs, ITEs and Polytechnics to stretch their brains for 48 hours as they solved over 60 challenges. This year's theme was "Superheroes", with challenges created around themes and plots of Heroes and Villains duking it out. Several categories were available, ranging from Web and OSINT to Reverse and Cryptography.

There were also talks and discussions held by industry networking partners such as CDC, DSTA, and CSA.

SG CTF

SG CTF is a cybersecurity competition organised by CTF.SG. It was as exciting as always, starting with an exciting trailer created through some neat tricks on the disassembling software tool, IDA-Pro. Participants were privy to a host of challenges, ranging from topics like Web, Reverse and Forensics.

Our team, DullSec, consisting of Benedict, Clement, Colin and Nicolas, manage to be in the top 15. While we could not win any prizes, the experience allowed us to gain more experience and do better in future CTF competitions.

SGCO

Some of our NullSec Exco Members

participated in the Singapore Cyber Olympians (SGCO) Programme in February 2022. As this programme aimed to identify young cybersecurity talents, our exco members had to undergo an extensive selection trial where they were tested on their various cybersecurity skills such as Penetration Testing, Network Forensics, Cryptography, etcetera. Some of the challenges required them to analyse network packets using Wireshark and even crack the password of both zip files and normal files with the help of cybersecurity tools.



Rank	Name	Score	Latest Solve
1	Social Engineering Experts 2	18529	14 hours ago
2	OSI Layer 0x41414141	16606	20 hours ago
3	Social Engineering Experts 1	10583	14 hours ago
4	Team Kotori	9645	a day ago
5	:pensive:	6715	19 hours ago
6	Th3 InSightful Ones	6595	13 hours ago
7	iMonkee Pro Max	5639	21 hours ago
8	Thonk	5470	14 hours ago
9	Teh	4720	a day ago
10	Bathing Frog	4665	a day ago
11	Something Duck Related	4647	a day ago
12	ItzyBltzySpider	4647	21 hours ago
13	Dullsec	4642	a day ago

HTX Investigators' Challenge

Stunning most challengers with their interface was the HTX investigators' challenge. Unlike most CTF competitions where challenges were all available to the participants, this competition had its participants running after the challenges - literally. Participants had to manoeuvre their in-game avatars to find challenges hidden around the vast maps HTX featured - a Strange Bunker, the HTX Office Building, and an F1 Racing Track.

This one-day challenge was no doubt a one-of-a-kind experience like some face-to-face challenges. One such challenge required participants to learn and try out their hands at fingerprint dusting and lift on drone propellers. On top of this, challengers also had to compare and identify whom the fingerprints belonged to, in order to complete the challenge. We are proud that one of our teams CookieZ consisting of Zi Bin, Jason, Kai Xian and Yi Jie, won the **eXcellence Award**.



Open House

Ngee Ann Polytechnic held our annual Open House event from 5th to 8th January 2022. Many groups of interested secondary students and parents dropped by our CSOP lab to hear about our students' interesting journey in their Cyber Security & Digital Forensics course and a live demonstration of the phishing attack.



AISP Ladies in Cyber Symposium

AISP invited female members to join and hear from the current female leaders in the Cybersecurity industry. Many panellists and speakers were giving us a chance to learn and listen to current hot topics like threat modelling, Internet of Things, as well as Risk and Security Operations.



AISP Ladies in Cyber International Women's Day 2022

On 8 March, AISP invited female members to join and hear from the panellist on International Women's Day speaking about "Breaking the Bias". Our members were given an opportunity to explore the Trend Micro office and ask our burning questions to cyber security experts.

Serangoon Secondary School ~ Cyber Immersion event

A group of students from Serangoon Secondary School dropped by at Ngee Ann Poly School of ICT for an in-depth dive into the courses available in ICT. The students had expressed an interest in Cybersecurity, and hence NullSec SIG was inclined to help out. We demonstrated common cybersecurity attacks, including session hijacking and rogue Wi-Fi.

Thereafter, we also gave them a tour of Block 31, Level 5, The Byte; we introduced them to the CSOP and White-hat hacking rooms and the various other facilities and leisure spots in that block.

AISP Ladies in Cyber Learning Journey to CISCO Office

On 21 Jan, AISP invited female members to join and hear from the sharing of organisations like Cisco. Through the sharing of the industrial experts of their nature of the jobs, our members learned the different progression that members can make in the industry.



SVRP Award Ceremony 2021

On 19 January, some members and exco helped in the SVRP Award Ceremony organised by AISP (Association of Information Security Professionals). Our members assisted in registration, emcees, award bearers and ushers. This event celebrated those who have dedicated their time to serving their community with their cyber security expertise.

Some of the award recipients were Tay Gao Jun, who received the first Honorary Ambassador Award. Other recipients receiving the silver and bronze awards were Ngui Jia Le Sherlena, Marzan Richard Paul, Elsa Lee Ting, and Tan Yee Ming.





OVERFLOW

BYTE® Hackz

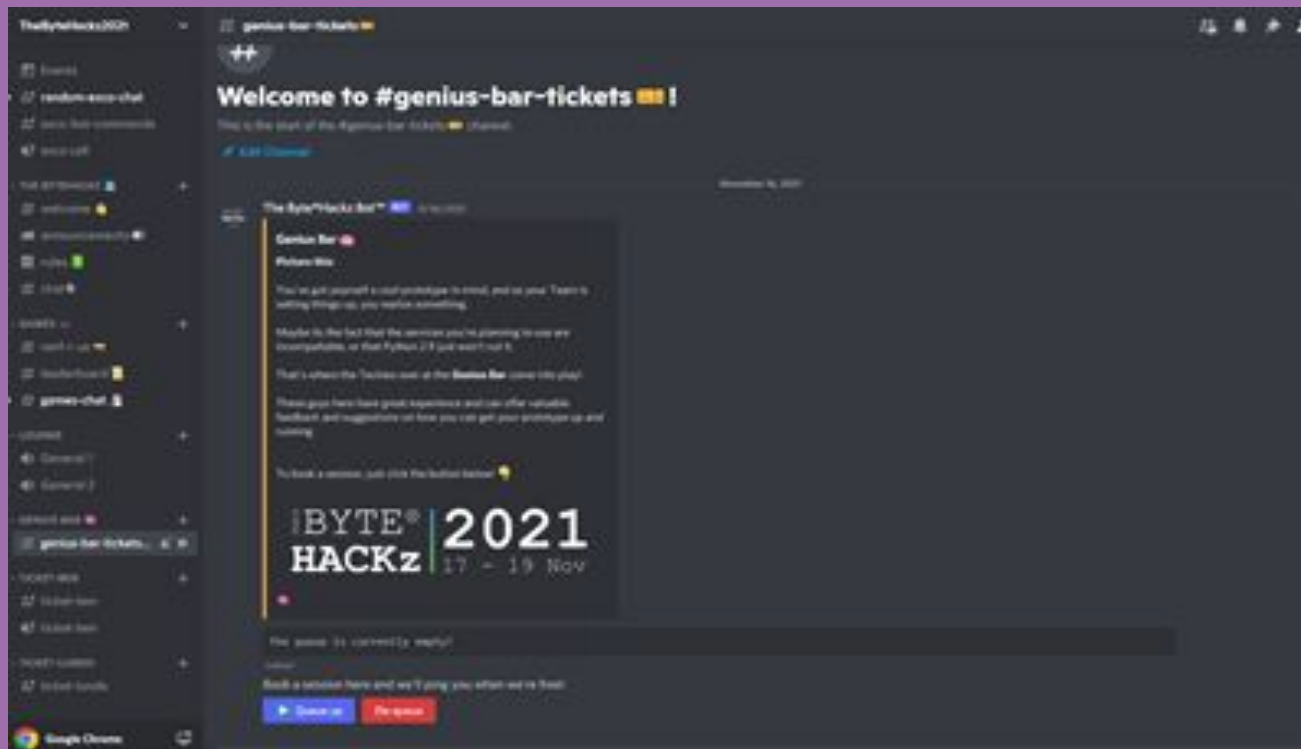
BYTE® Hackz is an annual hackathon organized for the IT (Information Technology) and FI (Financial Informatics) students taking the module, Portfolio Development (PFD). The event was conducted hybrid (with online and onsite elements) using MsTeams. While in school, the participants had the opportunity to work face-to-face with their group mates, allowing them to better carry out their discussions.

Besides taking charge of operations that facilitate the participants working on their projects, Overflow had set up various interesting segments/ stations, such as 'Genius Bar' which consist of seniors from Overflow providing technical consultation to hackathon participants, and also the 'Nerf Station' where participants could take break times to relax through play with nerf blasters.



BYTE® Hackz

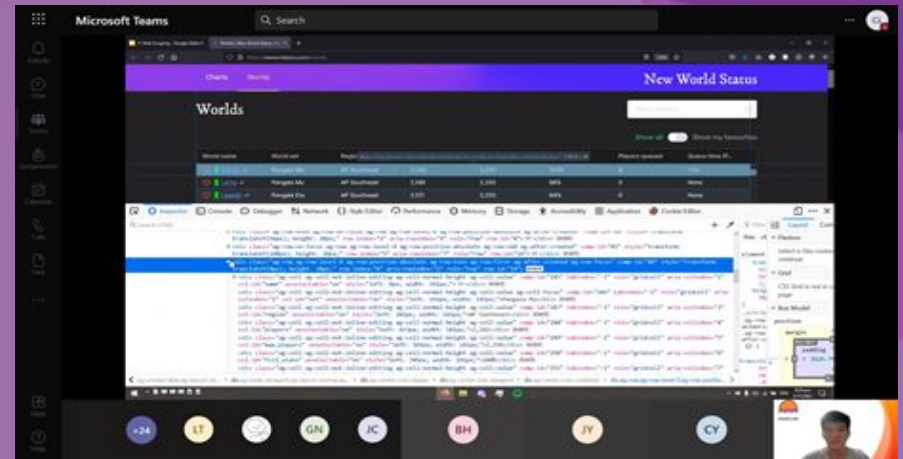
In addition, Overflow tech team had developed Discord features to make announcements and to allow hackathon participants to “book” for tickets remotely, for slots at Genius Bar or Nerf Station. This allowed better management of booking queue and also prevented people from gathering at the stations. On the last day, goodie bags were given out to the participants to take home and enjoy.



Poly-ITE Olympiad in Informatics (PIOI)

After a one-year hiatus from the annual Poly-ITE Olympiad in Informatics (PIOI), the competitive programming competition spearheaded by Overflow was brought back, this time virtually! To create a level playing field for all participants regardless of their previous experience with competitive programming, Overflow had conducted introductory workshops before diving into how the algorithms taught could be applied in a real-world context!

After the workshops, participants had the opportunity to put their newfound knowledge to the test in Overflow's PIOI main event, which places emphasis on the participant's problem-solving ability alongside their knowledge on data structures and algorithms through writing efficient code.



Weekly Technology Workshops

Interesting new and upcoming tools and technologies were shared with the members during Overflow's weekly workshops. The workshops were conducted online on Teams. In these workshops, Overdlowers had the opportunity to learn new technical skills and knowledge beyond their curriculum. They also got to bond and interact with like-minded members with common interests in technology and programming through bonding activities mixed in with workshops. Some of Overflow's noteworthy workshops focus on Basic C++, flask development, web scraping and computer vision.

Diploma in IT Showcase, ICT Open House

Overflow was given the opportunity to present technical demos on behalf of Diploma in IT for Open House 2022. The technology showcase included demonstration of Computer Vision, Internet of Things (IoT), Fun in Programming and Mobile Applications Development, Game AI and Game programming. The displays featured live object detection, an Othello game with AI bot, a game engine created from scratch in C++, pathfinding demonstration, an iOS mobile app and a Raspberry Pi game.

Overflowers had the opportunity to interact with prospective students and their parents, sharing their experiences and insights about the course and school. It was indeed a fruitful experience overall to represent Diploma in IT and showcase the creative work of Overflowers!



MSI Hackathon 2022

MSI hackathon was MSI Global's very first hackathon, which is a three-week long competition that required participants to propose and develop a solution that allows commuters to purchase RTS tickets electronically and use QR codes on the RTS.

Overflow SIG sent a team consisting of **Qin Guan (CSF Year 1)**, **Lai Wai Hang (IT Year 1)** and **Yee Jia Chen (IT Year 1)**, which participated, in addition to 2 other teams in NP, to represent the school in the competition.

In the hackathon, the team applied both hard technical skills, as well as soft skills to pitch their solution to the judging panel. The team also had the chance to meet and get advice from industry partners such as Co-founder of Performatix (Mr Sooraj Jayaraman) and Co-founder of UXAmry (Mr Kuldeep Kulshreshtha) on their ideas and how they can improve.

The team's hard work paid off; they were shortlisted in the first round and advanced to the finalist round. During the final round, the team managed to get the **3rd position** in the competition!



The AISIG logo is presented in a bold, white, sans-serif font. It is centered within a horizontal rectangular bar that has a dark purple background. This bar is layered on top of a slightly larger, lighter purple rectangular bar. The entire composition is set against a light purple background that features a black, sawtooth-patterned border at the top and a decorative, curved purple shape in the bottom-left corner.

AISIG

Recruitment

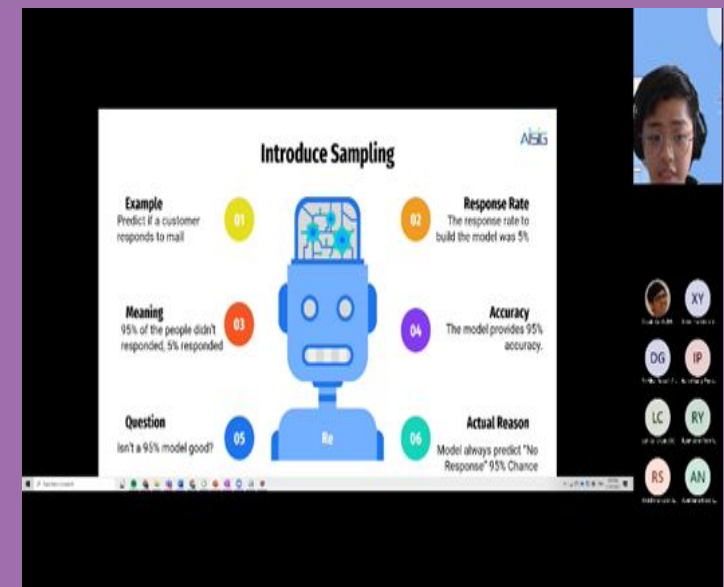
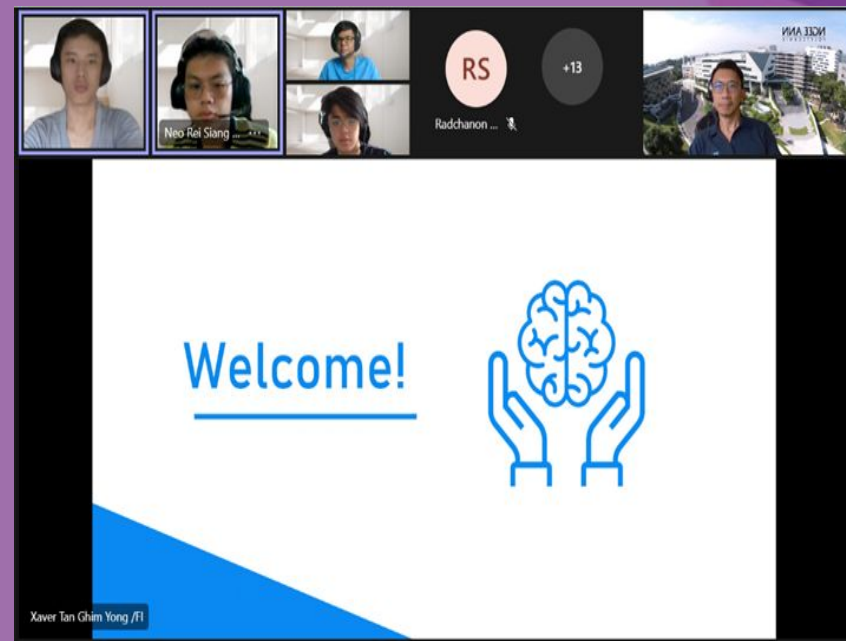
AISIG hosted a recruitment camp, where they shared about AISIG and discussed what is an AI. They also went through the uses of AI in our daily lives and provided examples of AI being used by businesses.



Along with this, AISIG hosted a logo design competition where participants can show off their creativity.

December Stock Market Prediction Challenger

AISIG hosted an internal competition cum workshop during the December break. This competition includes 3 workshops, a Microsoft Azure workshop, a basic Pandas workshop, and a sklearn workshop.



XPLORE (8 Apr)

AISIG hosted an introduction to data visualisation workshop. Along with students from Ngee Ann Polytechnic, AISIG also hosted a batch of students from Shenzhen Polytechnic with their professors and directors. Before the main workshop was held, an introductory speech was given by Deputy Director Mr Chang Bin Haw from Ngee Ann Polytechnic, School of InfoComm Technology and Professor Wang Yongxue Deputy Dean from ShenZhen Polytechnic, to kickstart the event, followed by an ice breaker session. This was where participants from both polytechnics were encouraged to intermingle, sharing cultural differences and learning from each other. The main workshop taught data visualisation using PowerBI and "Evolution Simulator". Participants also get hands-on experience on PowerBI as they worked in their groups to complete the goals.

At the end, participants shared their experience in this event together and talked about the relevance and importance of data visualisation in their respective countries. Overall, the event provided Ngee Ann students with insight into a different culture in Asia and better understand the importance of data visualization.

After the workshop, the participants would create a machine learning model to predict whether the stock is a buy or sell stock. After the workshop, the participants would create a machine learning model to predict whether the stock is a buy or sell stock. The winner of the competition was Team Blahaj! Additionally, Mr Koo from AISG was invited to talk about his experiences working with AI, the ethical considerations of AI usage and the absence of universal AI standards.





SCHOLARSHIP / OUTSTANDING STUDENTS' FEATURE

DSTA Polytechnic Digital Scholarship Recipient



"Many of us joined NP School of ICT because of a strong interest in cybersecurity. I took it to the next level and joined the ranks of Singapore's real-life cyber defenders, thanks to the Defence Science and Technology Agency (DSTA) Polytechnic Digital Scholarship.

As part of the scholarship, I'm currently interning at DSTA and working on a software that helps network administrators audit the security posture of network devices more efficiently, with reference to industry best practices. Generally speaking, data is transmitted between devices through network switches. These can run into the hundreds to thousands in an enterprise network, which makes manual checks time consuming. By speeding up this tedious process, my software helps reduce the number of weaknesses that can be exploited within the network.

The internship gave me hands-on experience with network devices and real-life switches, and provided me with insights into the architectural design of enterprise networks. It was exciting to explore something beyond the school curriculum.

I also enjoyed interacting with my mentors, Mr Darren Foong and Mr Ang Guo Tai from DSTA's InfoComm Infrastructure Programme Centre, who were very knowledgeable, approachable and friendly. Working with them helped me better appreciate DSTA's work culture - staff are given the freedom to try out different technical approaches, and also encouraged to explore new tech areas.

If you are interested in IT, cybersecurity or engineering, apply for the DSTA Polytechnic Scholarship too!"

- Tang Ming Feng, Year 3 IT student

UPCOMING EVENTS

- **October bonding event (year 1s)**
 - **Virtual marathon**
 - **ICT Society Investiture**
 - **June Sports and Dance Camp 2022**
 - **October Seniors Events (year 3s)**
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BROUGHT TO YOU BY:



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