JAN

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2022

NATIONAL TSING HUA UNIVERSITY

DEPARTMENT OF COMPUTER SCIENCE

AUTOBIOGRAPHY 自傳

LEAN JENG WEN JOSHUA
連正文

CHINESE TAIPEI SCHOOL
KUALA LUMPUR

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LEAN JENG WEN JOSHUA 連正文

2004 SEP 04 | PORTFOLIO.CHIBIMELLO.COM
MALAYSIA | JOSHUALEANJW@GMAIL.COM

"To him that will, ways are not wanting."

// LANGUAGES //

- ■■■■■ 英文 English (IELTS 7.5)
- ■■■■■ 中文 Chinese (TOCFL B)
- ■■■ 馬來文 Malay
- ■■■ 泰文 Thai

// ABILITIES //

Programming Languages:

- ■■■■ Python
- ■■■■ HTML & CSS
- ■■■ JavaScript
- ■■ PHP & SQL
- ■■ C & C++

Other Skills:

- ■■■■ Adobe AE, PR, PS, ID
- ■■■■ Computer Assembling
- ■■■■ Arduino
- ■■■■ Linux
- ■■■ Blender 3D

// INTERESTS //

- </> Servers & Coding
- Editing Videos
- Saxophone
- Fencing
- Baking

// AWARDS //

Certificates and Awards can be viewed at portfolio.chibimello.com/cert

2021 **>> 全國高級中等學校小論文寫作比賽**
- 小論文 “探討比特幣在疫情下的異軍突起” 甲等

>> Xiamen University Malaysia
- Chen Jingrun's Cup Secondary School Mathematics Competition Proficiency Award

>> Chinese Taipei School Kuala Lumpur
- 109.2 Physics Science Stream First Place
- 109.2 Student Improvement Award (Overall)
- 109.1 Student Improvement Award (Natural Science)
- 109.1 閱讀海報比賽 “夜曲” 佳作

2020 **>> Malaysia Association of Marching Arts**
- Malaysia International Virtual Band Championships 2020 (Global Individual Woodwind Silver Award

>> Chinese Taipei School Kuala Lumpur
- 108.2 Most Improved Student Award

2019 **>> Xiamen University Malaysia**
- Chen Jing-Run's Cup Secondary School Mathematics Competition Credit Award

>> Chinese Taipei School Kuala Lumpur
- STEAM-Math Chess Competition Fourth Place Award
- English Creative Writing Competition Consolation prize Award

// DUTIES //

高二下 109.2
副班長
英文小老師
線上電腦輔助員

高二上 109.1
副班長
資訊小老師
馬來文小老師
線上電腦輔助員

高一下 108.2
班長
學藝股長
資訊小老師
英文小老師

高一上 108.1
學藝股長
資訊小老師
英文小老師

// CLUBS //

School:

高二 109年 //
美食探勘社 成員

高一 109年 //
科學研究社 成員

Outside School:

2010 ~ 2021 //
Fencing: Blade Fencing Kuala Lumpur

2010 ~ 2018 //
Boy's Brigade Kota Kemuning, Malaysia

2019 ~ 2021 //
Tech Education Centre: Chumbaka Maker Club, Malaysia

2019 ~ 2021 //
Saxophone: BroKen Sax, Malaysia

// CERTIFICATES //

2021 **>> National Taiwan University (Coursera Online)**

- Programming for business Computing in Python (2) (Graded 86/100)
- Programming for business Computing in Python (1) (Graded 84/100)
- Computer Programming, C Language (Graded 100/100)

>> British Council
IELTS 7.5

2020 **>> National Taiwan University (Online)**
2020 AI Development & Application Online Program (Graded 70/100)

>> Chumbaka (Tech Education Centre)
Arudino Projects with Mobile Apps

>> Chinese Taipei School Kuala Lumpur
Participated in Annual School Talent Show

2019 **>> Fencing Singapore**
Participate in Singapore Asian Cadet Circuit 2019 (Epee & Foil)

>> Chumbaka
Game Design With Scratch

>> 海外台灣學校學生暑期返臺文化營
Participate in 108年海外台灣學校學生暑期返臺文化營

>> Quanta Culture & Education Foundation
Participate in 藝術小尖兵進階培訓課程「遇見大未來」

>> Royal Academy of Music
ABRSM Grade 4 Alto Saxophone (Merit)

2018 **>> Blade Fencing**
Participated in Blade Fencing Camp, Chiang Mai, Thailand (one week)

>> The Boy's Brigade Asia
BB Cambodia International Exchange Programme, Siem Reap – Phnom Penh, Cambodia (one week)

>> The New York Times
Participated in The New York Times Asia-Pacific Writing Competition

EPISODE 1 // ACT 1
THE ROOT OF MY BEING

The picture below is a snapshot of the most important part of my life – my family. I consider myself very blessed to have been brought up in an extremely close-knit family. Much of who I am today is a reflection/result of the love and care, relationships, and interactions between my family and me.

My father is a Malaysian (of Chinese ethnicity) who develops independent solar power projects. My mother is Thai (of Chinese ethnicity) and a housewife. My brother is one year older than me and just graduated from high school. He is studying a bachelor's degree in electrical engineering and computer science, at National Tsing Hua University, Taiwan.

Due to my father's background which involves investing, he encouraged **trial and error and experimenting**, to **expand my creativity and knowledge**. In this household, my parents brought me up to have a few core values, which are: **being responsible, being considerate, and thinking of others**.

left to right, my mother, father, elder bother, and me

EPISODE 1 // ACT 2
A CULTURAL CHAMELEON'S JOURNEY

I have lived in three countries of great contrast; I was born in Bustling Bangkok, Thailand, and still visit every year. When I was three years old, due to my father's work, I moved to Ho Chi Minh City, Vietnam, the City of Motorbikes. After that, we moved to where we currently are: Shah Alam, Malaysia.

Although I was young then, I believe that I subliminally absorbed the different cultures. It allowed me to understand different ways of life, as interpretation is often contextual. For example, I used to attend a Korean kindergarten when we lived in Vietnam, and I still remember singing Korean songs at that school. I went for Taekwondo lessons together with my Vietnamese friends and hung out with my Malaysian friends in the evening. Having Vietnamese, Thai, and Korean cuisine for breakfast, lunch, and dinner was my way of life. I grew up being **adaptable to different cuisines, environments, languages, and people**.

Not only was I blessed to be in a multicultural environment, I was also able to absorb multiple languages at once. My primarily language being **Chinese** due to growing up studying in a Taiwanese school; my father speaks to me in **English**; my mother speaks to me often in **Thai**; and I had to learn basic **Malay** to thrive in Malaysia.

Starlight international kindergarten
Vietnam
three

Chinese Taipei School
secondary one
Malaysia
twelve

Chinese Taipei School
primary one
Malaysia
six

Chinese Taipei School
senior one
Malaysia
sixteen

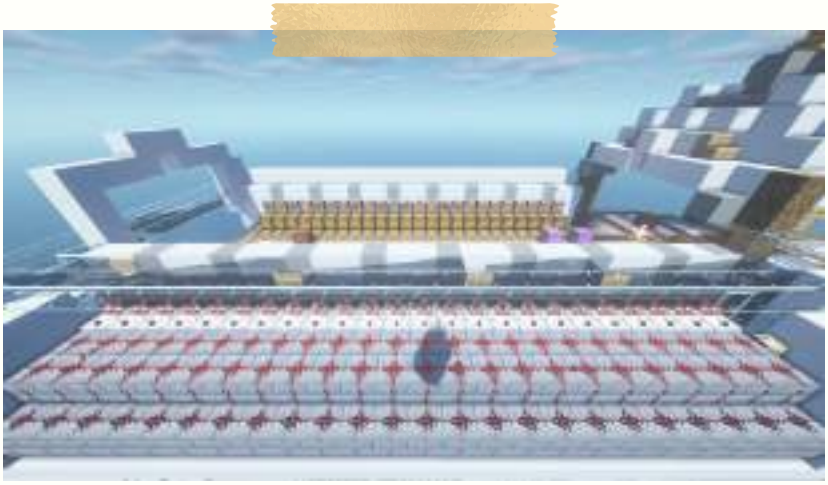
to infinity

EPISODE 2 // ACT 1
THE IGNITION TO MY PASSION PART1

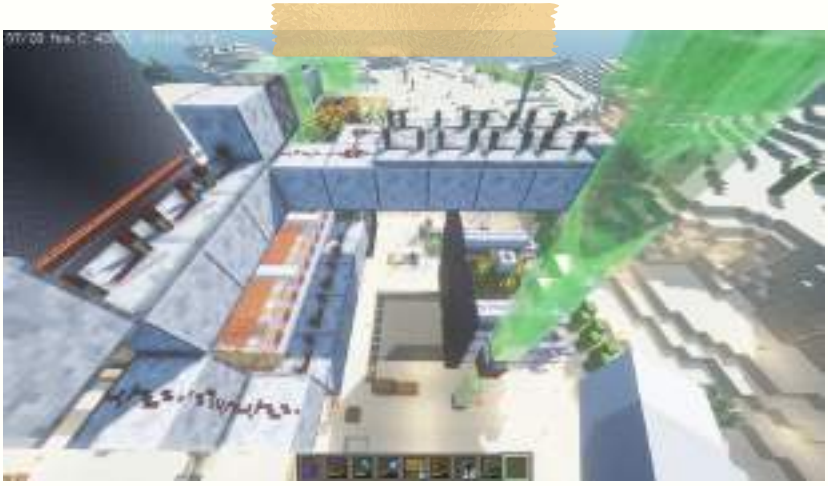
Minecraft, the game I enjoyed the most

Ever since I got my hands on Minecraft, I loved the creative sandbox perspective of the game. The main goal is to gather resources and to build buildings and contraptions to encourage the automation of resources in this virtual world where you can play with others. The amount of creativity you can pour into the game is limitless.

In the game, there is a featured mechanism that has similarities to computational logic. This mechanism/item/feature, Redstone, can be described as a graphical (3-dimensional) programming language. The Redstone aspect of the game helped me to generate resources (such as wood and metal) effortlessly as I could automate the production. **This gave birth to my interest in computers and coding**. Causing me to devote around 5,000 hours in the Minecraft world, and a significant amount was with Redstone.



An item sorter to make life easier, inside the game Minecraft, built by my friends and I.



An auto tree farm, automate the process of harvesting trees, also built by my friends and I in the same game world.

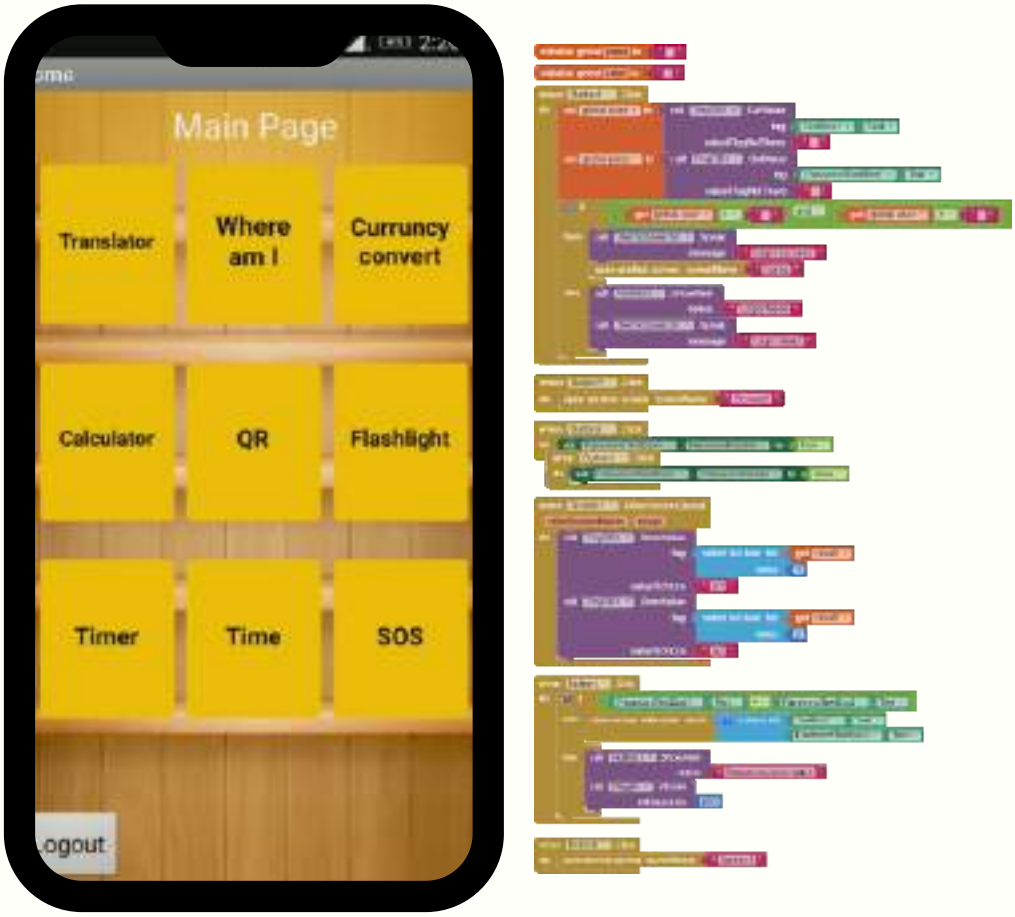
EPISODE 2 // ACT 2
THE IGNITION TO MY PASSION PART2

Blocks which unleashed my passion for programming

During Junior Two, I attended a basic coding camp that taught block-based visual programming. The discussion program was the MIT app Inventor 2 which uses two-dimensional blocks with different colors and properties.

The camp lasted a week, and a small app-making competition was held at the end of the camp. We learned about basic coding logic and how we could apply it to practical usages. Using that knowledge, I created a Survival App, containing amongst other features/things GPS location and height/distance estimation (using the Pythagoras Theorem) for estimating lengths. When showcased during the competition, it caught the hearts of the judges for being highly functional and user-friendly. To my surprise, I won the first prize in that competition.

me, presenting my app to audiences



the app, and a snippet of the code of the app

The thrill of winning the competition and the passion for creating a complete application by myself made me hunger for more. Of course, it took a substantial amount of time to understand the basics of programming, though in hindsight, it felt like the snap of a finger. After investing hours into the program, studying and formulating the ways I could use the blocks, I gained a good understanding of the principles of coding and felt inspired to **venture from the boundaries of visual blocks and graduate into text-based programming**.

Text-based programming has so much more unbound potential compared to plainly arranging visual blocks. My passion has been fully unleashed by the limitless capabilities of coding. I was devouring the programming books at light speed and also spending a great deal of time on GitHub and Stack Overflow, allowing me to **learn from incredibly talented programmers around the world**.

EPISODE 2 // ACT 3
THE FIRST BATTLESHIP FORMATION

My first computer is a battleship, bringing my passion forward

Not long after, my father had noticed my growing desire for coding and computers and thus approached me with a generous budget for a new computer, but with a catch. I had to build the computer, which implied that I had to search for the components and assemble them. The objective was to build a high-performance computer at the lowest cost. That entailed:

- Understanding how each part functions and their compatibility with each other,
- Comparing different brands and their price-performance ratio to lower the cost,
- Listing and sourcing the required components online from a trustworthy supplier,
- Assembling the components to form a functional desktop computer.

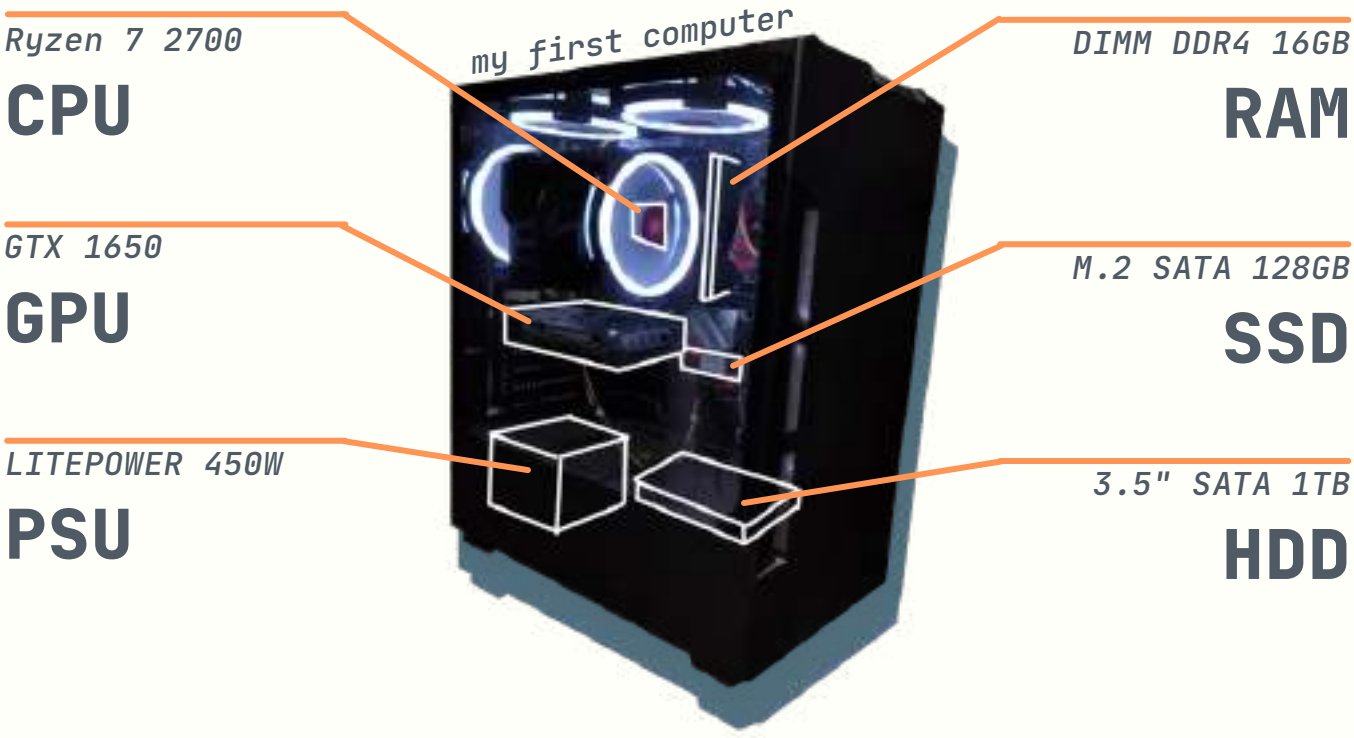
assisted by a classmate, building my first desktop computer

During the process, I familiarized myself with the impact of each component, including the motherboard, processor, power supply, memory, graphic card, and storage. The challenge also gave me a good understanding of the PC market, how I can acquire parts with the best price-performance ratio to narrow down the final cost for an acceptability quality.

I trawled through online shops in Taiwan, Malaysia, Philippines, and Indonesia for computer parts. Sometimes I could get a good bargain due to different pricing in the different countries where I could read the local language.

After building my desktop computer, word got around in my school, and I was asked to help teachers and classmates upgrade their old computers or build them a new desktop computer. I was happy to assist them, and even more glad that I had originally accepted my father's offer. So far, I have **assembled a total of 7 desktops computers from scratch**, and have **modified and upgraded more than 20 laptops and desktop computers**.

Having some basic knowledge of both programming and computers helped me to understand the dynamics between software and hardware.

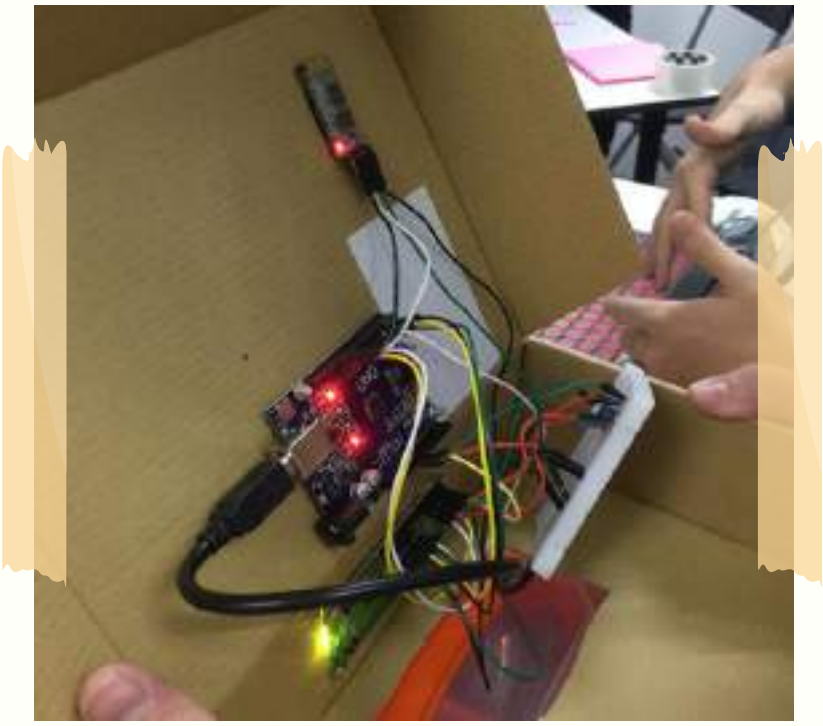


EPISODE 2 // ACT 4
BRIDGE BETWEEN TWO CITIES

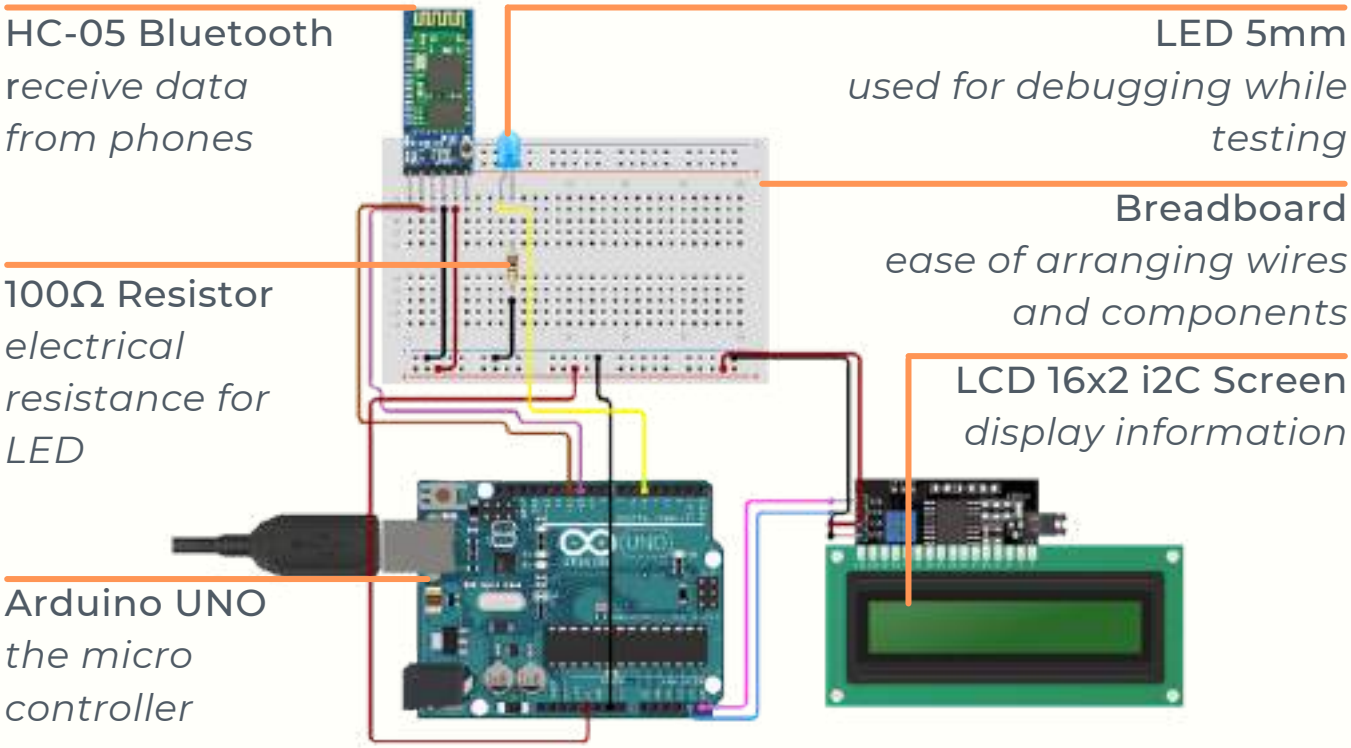
Two cities of the IT world, software and hardware

When I was in Senior One, I joined a computer class outside school with a few of my schoolmates. We were learning about Arduino, a single-board microcontroller. Arduino caught my attention as it could integrate both software and hardware into a single project; but with its increased capabilities, I encountered multiple complexities. Before proceeding with any projects, I had to study and get familiar with a new programming language, C++, used in Arduino. I also had to learn how the wiring works and how I could manipulate it from the software to the hardware side.

After learning the basics, my classmate and I worked together on a small project, which was meant to be an IoT voting system. We started by gathering the required components and assembling them. Then, we wrote the code for the Arduino as well as the app. The result was a polling station accessible anywhere through the app via Wi-Fi. We had an exhibition day and presented the Arduino IOT voting system to all the parents and fellow students, many audiences recommended how we could apply this system to various places and how we could improve it. The presentation and demonstration on the exhibition day ended in success.



inside the Arduino IOT voting system



components and design of the Arduino IOT voting system

From this course, I learned how to **transition a software signal into an electrical signal using Arduino**. The exhibition day also trained our **presentation skills** that can be applied in the future. Furthermore, it taught me that **cooperation within a team** is important to produce the best result.

my teammate and I presenting the Arduino voting system

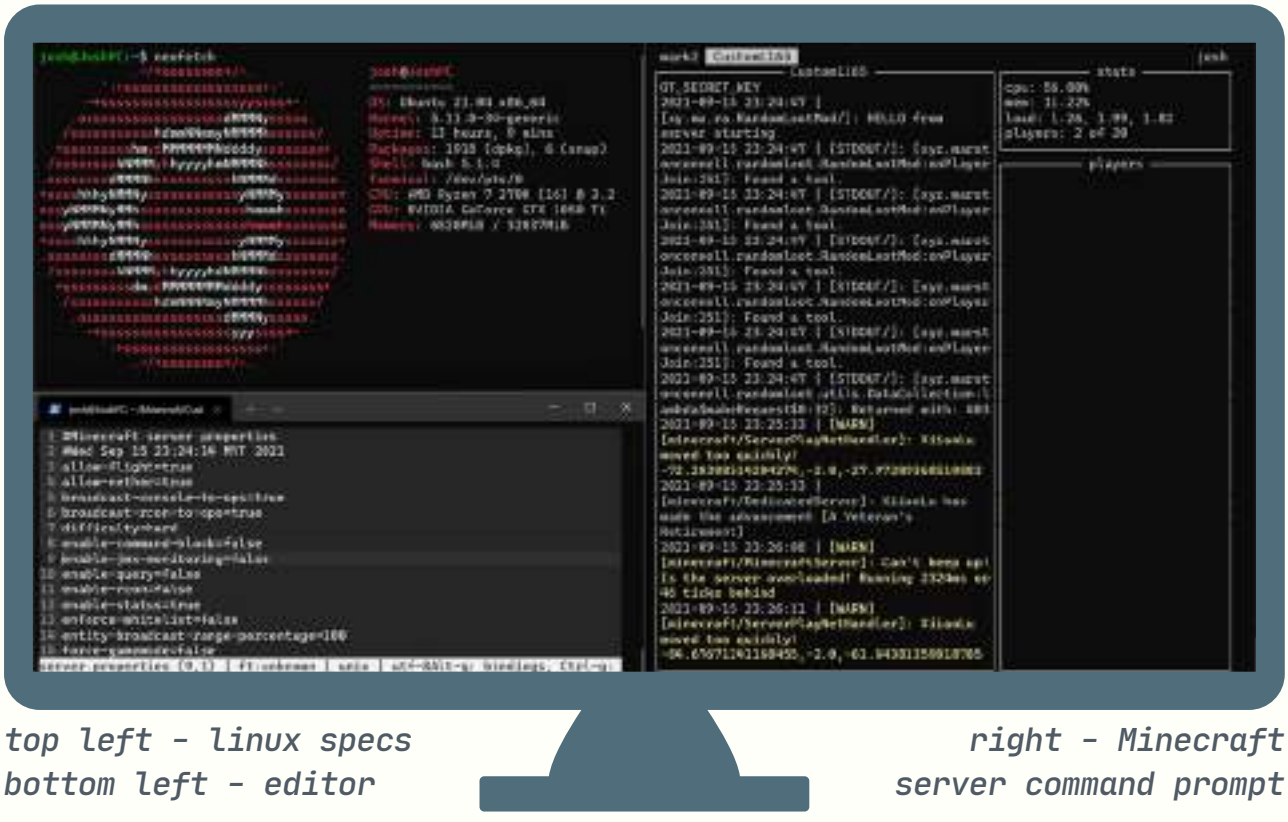
me, receiving the certificate of completion

EPISODE 2 // ACT 5
A STRAIGHTFORWARD INTERFACE

A single-line command prompt difficult yet simple to use

After building the new computer, I wanted to maximize the raw capability it can achieve, so I migrated the Windows operating system into a Linux operating system, running Ubuntu Server. Although Windows has a great graphical user interface (GUI), I prefer Linux due to its simplicity and direct interface, especially in running tasks. Using the text-only command prompt made me confused at first, but soon I grew accustomed to it.

With basic skills on hand and a decent home internet speed, it was easy to start hosting a Minecraft server, which could easily take 100 players. I was the system moderator, and most of my classmates and friends enjoyed playing on the server. It took countless endless nights scrolling through GitHub and Stack Overflow, but I finally gained the skill to **operate Linux** and **understood how servers and networks work** in detail. Linux and Minecraft servers were the perfect red carpet to introduce myself to websites and databases.



top left - linux specs
bottom left - editor

right - Minecraft server command prompt

EPISODE 2 // ACT 6
INTO THE UNKNOWN DOMAINS

The World Wide Web is a huge unknown universe

I started web development due to the COVID pandemic in 2019. That year, we were supposed to celebrate Teacher's Day physically at school, but we did not have the chance to do so due to the pandemic. In response, I approached my homeroom teacher and proposed that we host this celebration online instead. I took my spare time while staying at home and spent it **studying essential web languages such as HTML, CSS, JS, PHP, and SQL**, from online courses, reference materials, and asking on public forums (such as GitHub and Stack Overflow). It was tiresome at first to understand the framework of HTML and CSS since they had a different structure from other programming languages. I poured myself into learning these languages, but time sped quickly as I was enthralled by the beauty of the logic of the language.

Thanks to GitHub's student package, I was able to gain access to a few online courses. A Certificate from one of the website that assisted me in learning web developing.

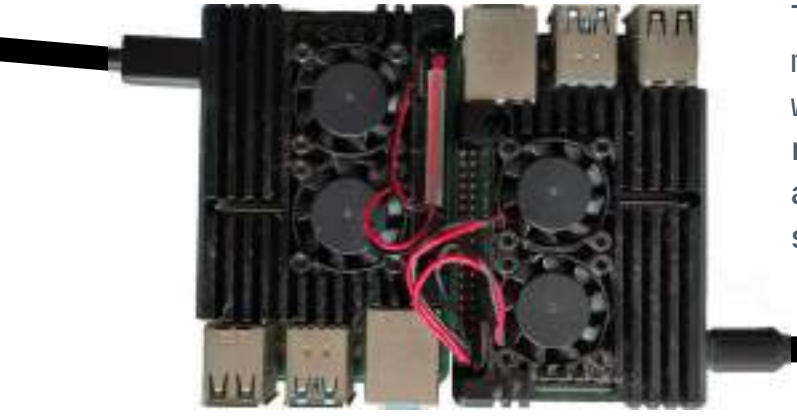
Certificate

While learning HTML, CSS, JS, I put my skills to the test and created my first ever webpage, running on XAMPP, a server solution stack package.

chibimello.com/teachersday

I started by creating the basic template where the content will sit using HTML and CSS. I then gathered different comments from teachers and all the students by using Google forms, then integrating the results with JS and showing it dynamically on the webpage. Following that, I added a feature that requests songs teachers wanted to hear when the school opens using PHP and SQL. Finally, working together with another classmate, I finalized the website's design and color, making it ready to deploy.

After completing the webpage with my team, the final product was truly satisfying to watch, hopefully to my teachers as well. Not only did I learn new skills from this experience, but I was also told that our class has set the historic new record for being the first ones in school to set up a web page for a school event. I was just a student, no less! The positive feedback given by many teachers **motivated me to keep learning about website development**.



two cluster Raspberry Pi

This project was before I migrated my desktop to Linux. My first public webpage, hosted on a Raspberry Pi, running Ubuntu Server 20.04, soon adding another making a cluster server.

Following that, during Senior Two, we were all assigned to pick a subject to self-study. I chose to self-study website development, resuming the time and effort I had poured into it. I pushed myself forward more to look into the deeper parts of web development, switching from plain HTML and CSS to using a pre-built framework called Bootstrap, allowing the code and the product to look cleaner. I upgraded my code from raw JavaScript to using more libraries such as jQuery and AJAX to make the website more interactive and user-friendly. To put my newly learned skills into practice, I added more websites to my collection.

The website meant to cheer our seniors before their university exam during the online period, though the celebration was held physically instead.

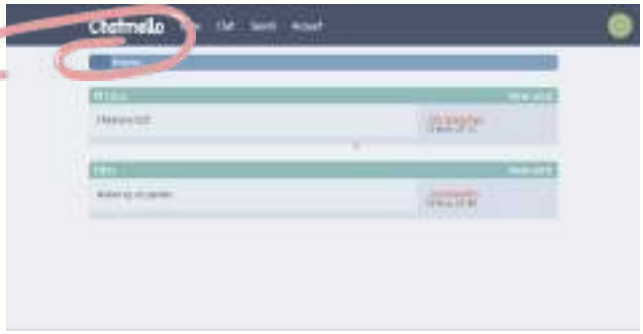
chibimello.com/exam2021

My senior's graduation book, people can view it online and save the hassle of going out to receive a printed copy during the pandemic.

chibimello.com/grad2021

Created for the self-study project. An online gallery dedicated to showcase all past events and memories of my class.

chibimello.com/classof2022



A forums page I worked on during my free time, writing both the frontend and backend line by line.

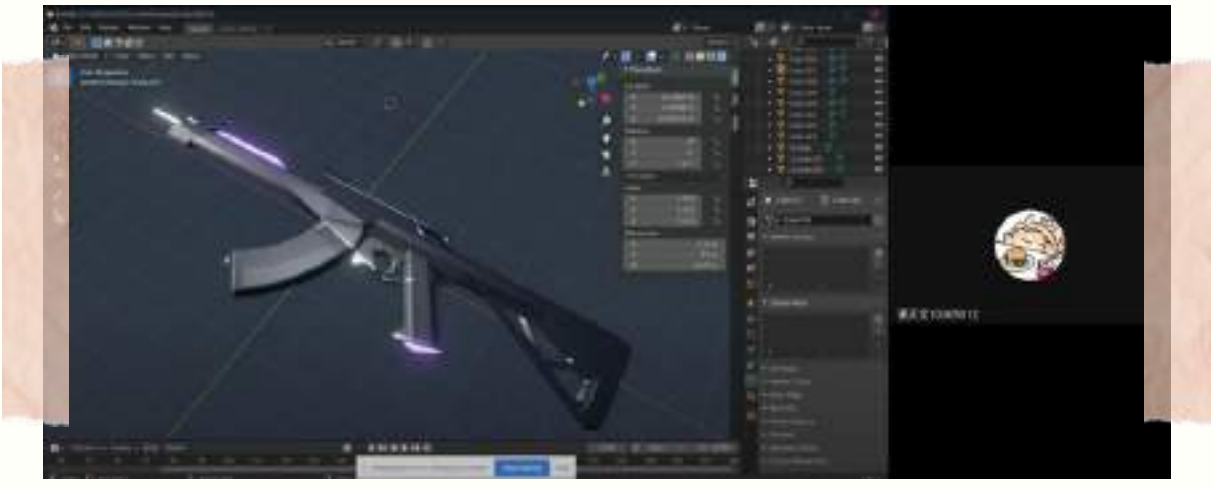
forum.chibimello.com

EPISODE 2 // ACT 7
A DIMENSION EXTRA

From 2D going up another stage to 3D

During the winter holiday of Senior Two, our holiday homework included an unusual task, as we were tasked to create a 3D model using any software. I would have settled with any program that was simple to operate, but it also made me feel guilty, given that I was allowed a month to complete the homework. In the end, I went with an open-source 3D creator called Blender – in my opinion, the hardest amongst most 3D modeling software. Learning a new software with thousands of functions and interfaces within a month was not easy, but I enjoyed the challenge.

In the first half of the month, I went through many tutorial videos teaching me how each tool works and how to create simple 3D objects from scratch. I started by creating a three-dimensional pistol since it had a simple shape, but it did not impress me as much after I completed it. Hence, I restarted and designed a much bigger rifle with intricate details, inspired by a computer game. During the process, my hard drive crashed and all progress was lost. Unfortunately, I had to learn this lesson the hard way, eventually restarting the whole project again. As I had already completed it once, though, I set the bar higher for myself and the outcome was ten times more refined compared to my first try. Although it was painful, I felt that it was worth the time and effort I put in. Not only was having this 3D modeling skill satisfying, this might be also the most satisfying hundred marks I had ever earned in the past 17 years. I hope shortly I can incorporate this skill with my programming knowledge to create a complete virtual world!



my presentation to the class, held online
my whole process: youtube.com/watch?v=rLRmvuunfdA

EPISODE 2 // ACT 8
CONNECTING THE DOTS

Refining all my thoughts

The Covid pandemic has limited us from doing activities outside, but it did not stop me from the yearning to learn computer science. During the time normally spent by going out, instead, I wanted to spend it productively. I asked around and searched the internet for online courses I could participate in and went through each of the courses during the free time given.

Aug 25, 2020
Learn HTML
- One Month
- Certificate

Dec 6, 2020
AI Development & Application Online Program
- NTU Taiwan
- Certificate

Feb 18, 2021
Computer Programming
- NTU Taiwan (Coursera)
- Certificate

Apr 29, 2021
Programming for Business Computing in Python(1)
- NTU Taiwan (Coursera)
- Certificate

July 28, 2021
Programming for Business Computing in Python(2)
- NTU Taiwan (Coursera)
- Certificate

Before attending these courses, my thoughts on programming were still messy, given that my knowledge was mostly self-taught. After going through the courses, it allowed **my idea of coding to be compiled, allowing me to operate my thoughts smoother while programming**.

Having a certain extent of skills in my hands, I participated the yearly hosted Google Kickstarter coding competition. Being mostly familiar with the Python language, I solved a few questions in each rounds of the competition successfully. I was not able to get any honorable positions in the competition, nevertheless, it let me **understand my skill level** compared to others, and **know that I still have a big room for improvement**.

Google Kickstarter Certificate

EPISODE 2 // ACT 9
EXPLORING THE UNCHARTED

Cryptocurrencies, a fairly new concept that caught my eyes

In early 2021, the hype in cryptocurrency exploded, due to the large price movement in Bitcoin. Cryptocurrency and blockchain caught my attention as it no longer needed a middle man to handle – a decentralized system. I was 高二 then, and curious as I was, I went through multiple explanation videos and white papers to understand the dynamics of cryptocurrency. As well as sacrificing my current graphic card to a short-lived experiment with cryptocurrency.

At the same time, we were struck by the COVID pandemic. The more I read, the more I noticed that the pandemic had some correlation with Bitcoin. Using this opportunity, my classmate and I researched based on the title, “Bitcoin’s rise during the pandemic (探討比特幣在疫情下的異軍突起)”, discovering how the bitcoin price and market react during the period of the pandemic. After spending multiple sleepless nights researching and working on the thesis, and with the help of my homeroom teacher, we finally concluded the final paper and submitted it.

The thesis we wrote earned a “Merit (甲等)” at Taiwan’s Nationwide Senior High Schools Short Essay Competition. My teacher, my classmate, and I were all surprised with the result we got. I was also happy to learn much more about economy, Cryptocurrency, and Blockchain in the process of completing this thesis.

Thesis Competition Award Certificate

link to the thesis we wrote

EPISODE 3 // ACT 1
MY BODY — FENCING

Schoolwork and computer science aside, I have never yet neglected my own body and mind. I started fencing at Blade Club KL when I was primary one, at that time I only treated it as an exercise or a fun activity, but soon after I realized that fencing is more than just fitness. Fencing is also more than a mental game. In a fencing match, **you have to make quick decisions under tremendous pressure** and have a **strong fighting spirit**. To get better in fencing, **I had to have a strong determination and solid discipline**.

my friend, me, and my elder brother, year 2011

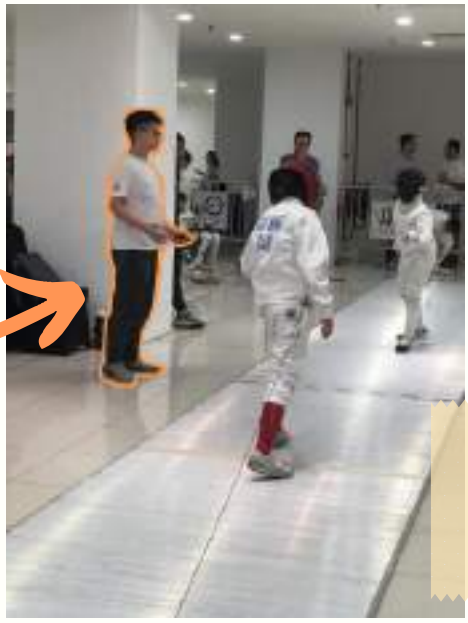
my elder brother, me, and the same friend, year 2020

Ever since I started fencing, I have been participating in most of the competitions in Malaysia, amounting to at least five matches per year. I have participated in the Asian Cadet Circuit competition four times in varying countries such as Thailand, Singapore, and Taiwan. Although I was only able to collect a medal once, the competitions allowed me to **meet many people and interact with them in the form of sword fighting**. Before every match, you would have to salute your opponent and shake their hand, as a form of respect towards them. Sometimes, my opponent may be provocative or try to exert dominance by screaming / shouting, but I would **keep my cool and control my emotions at all times**. Fencing has trained my sportsmanship and taught me to **play fair against anyone and everyone**.

Blade Fencing Camp at Chiang Mai, Thailand.

Training with different fencers from around the world, learning from the best fencers coming from Malaysia, Singapore, and Germany.

me, refereeing a match in the Young Stars under 15 years old competition.



When I was 15 years old, I was invited to help referee a competition hosted by the Federal Territory Young Stars, the Malaysian government's fencing competition organization. At that time, although I had been fencing for quite a while, I had little knowledge about refereeing competitions. In the beginning, it was bumpy, as most of the time I was confused about what to do and when to do it, especially as there was a huge crowd observing my every move. Over time, I got the hang of the basic procedures, but when technical problems arose or when a coach or parent tried to convince me to award a false point to a fencer, I would still panic a little. After this, during my free time, I would consult senior referees and learn more about refereeing rules and troubleshooting. It went smoother and smoother after each match I refereed, and finally, the competition ended in a success.

Through learning, I was able to received my first ever paycheck.

EPISODE 3 // ACT 2
MY SOUL – SAXOPHONE

Since I was young, music has always been by my side. I started learning the piano when I was in Primary One, and I took up the saxophone when I was in Primary Five. Whether it was listening to music or playing, not only did it feel relaxing, it also **allowed me to express myself and explore my creative side**.

I used to dislike the idea of performing, but after being on stage more frequently, it instead became fun and enjoyable to express myself in front of crowds. Our school hosts talent shows every year, and from Primary One until now, I have been participating in every year's competition. During Secondary Three, five of my classmates and I formed a school music band, I was the saxophonist, where we would perform on occasions such as graduations, events, and competitions.

I played as one of the saxophonist during my secondary three prom night

Performing at my school's STEAM event, during the closing ceremony

The music band our class formed, Six Flowers (六躲花)

When I was in Senior Two, due to COVID, we had to stay home. For the first time, Malaysia's Ministry of Education started an online music competition called Malaysia International Virtual Band Championships, which lasted a month starting from 1 November 2020. I was interested because the competition format is only a video, and it also had a solo woodwind (saxophone's classification) category. I looked up a song I liked and repeated the following actions many times for almost a month: I listened and I played. On the day of the deadline, I recorded myself performing at home and uploaded it to the competition platform online. A few weeks later, I jumped with joy after receiving the results, It was a silver award. I am happy for the results I got, but I wish to surpass myself in the future, hopefully bringing the gold award closer.

Certificate for achieving Silver Award

Music and programming, in my opinion, are somewhat similar. Both require technical and creative aspects. For example, playing jazz requires me to know technical theory such as chord progressions, timings, rhythms, dynamics, as well as blending a hint of creativity and improvisation. On another hand, on the technical side, understanding what each function does is important in coding. Creating an application with a clean GUI also requires creativity. In another way, both practicing music and coding require many iterations to get better. You will need to go through the same code again and again to refine it. Playing a music sheet requires many rounds of repetition to refine the smoothness of playing. **The similarities between the two allowed me to realize the reason I enjoy music and programming at the same time**.

Ken Leong, my saxophone teacher, and his students, including my brother and I, performing for a 2019 Christmas event.

EPISODE 3 // ACT 3
MY HEART – LENDING HANDS

‘Charity begins at home, but should not end there.’ Thomas Fuller

Due to the COVID pandemic, many small businesses were badly hit, and consequently, job losses were common. Work from home became ordinary, and many were restricted from leaving their house. We noticed that home farming was becoming popular. As such, we ordered a truckload of black compost earth, buying the material in bulk. For a week, we would spend a few hours with shovels transferring all the earth into multiple gunny sacks of about 25 to 30 kg each. Not only was the earth heavy, but it was also extremely smelly, and the process was tedious. Once the shoveling job was completed, I proceeded to advertise it on the community Facebook group. It did not take long before I got a large wave of requests to purchase the packed compost dirt. Soon, within a quick two weeks, a truckload worth of dirt was all sold dry. The total sales were a few times higher compared to the cost. The final earnings were satisfying to look at, as I did not have to ask my father for pocket money.

me standing up holding a shovel ready to shovel more earth

Since I was young, I considered myself to be extremely self-motivated. The drive that resides within me has never been fueled by interest in rewards or special treatment. During the pandemic I noticed the need for computers went a lot higher, therefore I offered people around me who did not have a computer to help them build a new PC. One of them being my neighbor, whose children study in the same school as me and had to share laptops due to the lack of computers. Being a computer geek, I had many spare parts from old nonfunctional computers. I scavenged working parts from a few different computers and assembled them into a fully functional computer. The computer could not run high graphic games due to its weak graphics card, but it was more than adequate for the online classes.

As switching from physical classes to online classes was difficult for most students and teachers, I volunteered myself to assist students and teachers online during the pandemic. I helped by **looking for plausible systems that assist online teaching and learning, troubleshooting any problems, and helping out when a student or teacher had technical issues**.

Even though I did this just to help people out, their appreciation fueled my drive to want to help more people in the future.

In Malaysia, during the lockdown, many people lost their jobs and started to put up white flags in front of their homes, indicating they needed support. I researched and found that there was a group of people named Kembara Kitchen, who helped out people desperately in need of help.

During that time, a public hospital with abandoned newborn babies requested help from Kembara Kitchen. In response, with the help of my parents, I used some money earned from selling earth to buy diapers, wet papers, and cartons of powdered milk, eventually donating them to a warehouse managed by Kembara Kitchen. A week later they responded saying the total donations were enough to support the hospital for another two months. Though it was not much, **I was glad I was able to reach out a pair of helping hands during this hard times.**

Transporting the cartons of powdered milk, wet paper, diapers to their warehouse.

Me, standing in front of their warehouse.

EPISODE 4 // ACT 1
WHY COMPUTER SCIENCE

I reflected on my passion for computer science during the COVID pandemic. I thought of the outcome when I put together a computer for my neighbor's son to attend his online classes. I remembered when creating websites for school functions, despite the pandemic, we still could gather together in a different way. **I realized that computers assisted me to help and make others happier more effectively**. Although the impact is small, I believe it was meaningful to my neighbor's son, teachers, and school friends. **I realized that computers are an enabler for me to help people more efficiently and effectively**.

However, I believe that the future is even more exciting. Computers seem to be getting faster and faster, perhaps exponentially so. It was fascinating to study Moore's Law, stating that the number of transistors on a microchip doubles every two years - implying a doubling in computer speed every two years. However, since I began to understand the interaction of both software and hardware, I read deeper and now I am more inclined towards Huang's Law (Jen-sen Huang, CEO of Nvidia), explaining that GPU speed is 25x faster than 5 years ago; implying a 5x computer speed increase annually, as he explained that the synergy between hardware, software, and AI makes this new law possible. The bottom line is computers will be able to help people even better and even faster. To paraphrase Malcolm X, **the future belongs to those who prepare for it today**.

I am certain of my passion for computer science. I am sure of this mission to enable computers to help people. The exponential increase in processing speed means many more applications are yet to be created which will help mankind tremendously. Deep learning in medical diagnosis has reached new levels of accuracy. We are on the cusp of the fantastic discovery of more computer applications that bring impact. **I would like to be part of this future today, by applying to the Computer Science program at your university**. I believe I not only have a track record, but also the passion and focus to study computer science. I believe your university will provide the ideal platform for me not only to **grow my knowledge and skills**, but the interaction with fellow students, lecturers, and professors will help **grow my passion for Computer Science and continue my focus on my mission to help people in the future**. Thank you.