Assignment 2: The IT World

Team Profile

Team name: Stick Finger Dismissal

Personal information

Name: Xuyi Wu (Virgil)
Student number: s3733582
My name is Xuyi, you can also call me Virgil. I come from China, I majored in Information and Communication Engineering in a military school and served in the army as a sergeant before I came here and majored in Info Tech. I love computer games and I'm very interested in programming. I hope one day I can develop my own game.

Name: Hui Li
Student number: s3642065
I come from China, so I am an international student in Rmit university. I have received 12 years of education in China. So Chinese is my first language, and English is my second language. Then, I will talk about my hobbies, computer is my favorite thing, I like playing computer games, watching movies, surfing internet etc. Computers is a best thing for me. After that playing basketball is my favorite outdoor sport, I like watching the NBA. LeBron James is my favourite NBA star.

Name: Basil Lilovac
Student number: s3786614
My name is Basil Lilovac and I was born in Australia. I am a first year RMIT student and am doing a Bachelor of Technology. Some hobbies of mine include basketball, video games, movies and tv shows. I have always been interested in IT, I chose to pursue a career in IT last year in year 12 because I felt passionate about it and thought that I could do well in it. My IT experience is very limited, the only real IT I have done was in high school although it didn't go into any real depth.

Name: Gong Jialiang (Datura)
Student Number: S3678537
This is Gong Jialiang. I'm from Southern China, Guangdong Province. I enjoy playing games, including ball-games and e games; hiking or driving out for a trip are also hobbies of mine. For information technology, I have firstly heard, and tried, and now learning. The more I know about IT, the more I am interested in it: a way to command a servant who never refuses you request, if you pay for electric fee. I have few IT experiences and the first experience is about the tiny little bit of knowledge about different of languages.

Name: Junquan Chen
Student number: s3762081

I'm from Hangzhou, which is located in the southeast of China. I'm studying a Bachelor of Information Technology at RMIT. I'm a kind of a rookie in the computer and IT area, this is my first time to study IT. I've never touched it before, computers used to be just entertainment for me. My favorite sport is basketball; I watch the NBA as well. Also, I play League of Legend and some video games on PS4.

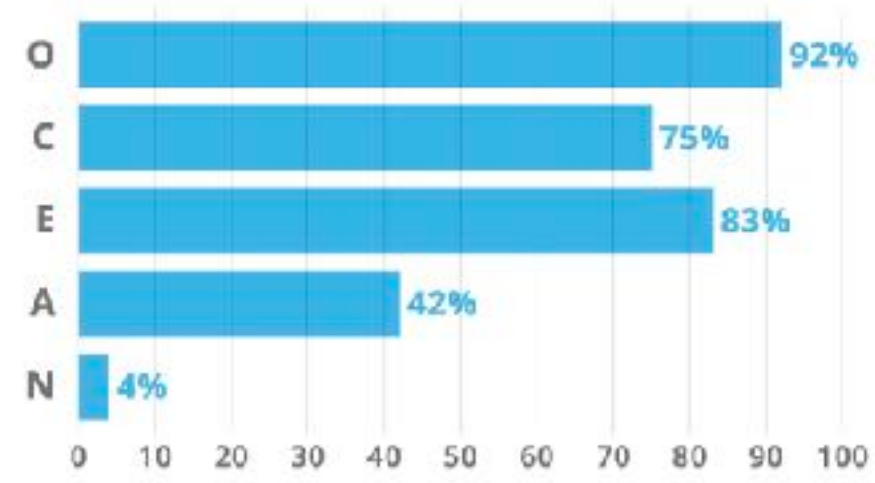
Name : YuHao Tang
Student number: s3699311
I come from China, I can speak Mandarin and English. This is the first semester at Rmit. I felt so excited and nervous about my university life. I have no IT experience but I think I will like it. I like baking, I am enjoy making desserts in my spare time, so I have become a foodie slowly. I also like sports so much, like skateboarding and basketball. I skateboard to and from school almost every day.

Name: ZhenhuiHe (Herbert)
Student Number: S3670160
Email: s3670160@student.rmit.edu.au
My name is Zhenhui, you can call me Herbert, I am from south part of China and I'm a crazy Liverpool fans, before I came to RMIT, I was studying Bachelor of Graphic Design in China, I want to become a web developer.

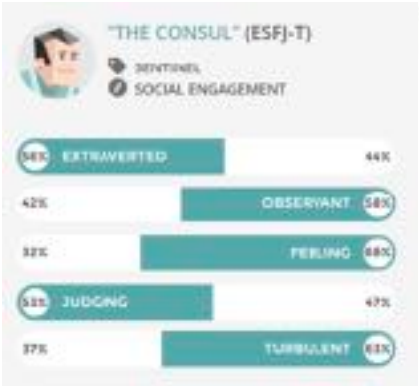
Team Profile

Test outcome:

Xuyi Wu:

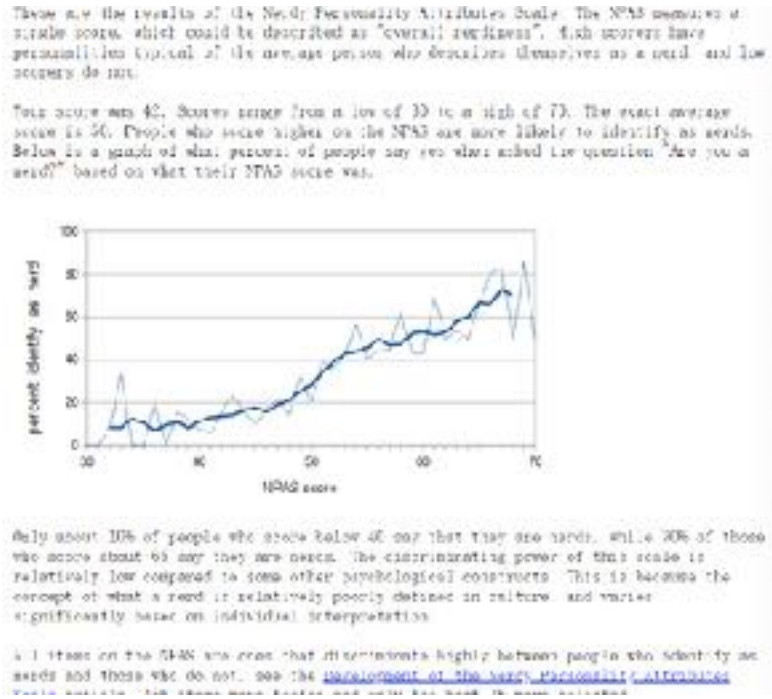


Hui Li:



Your Scores:

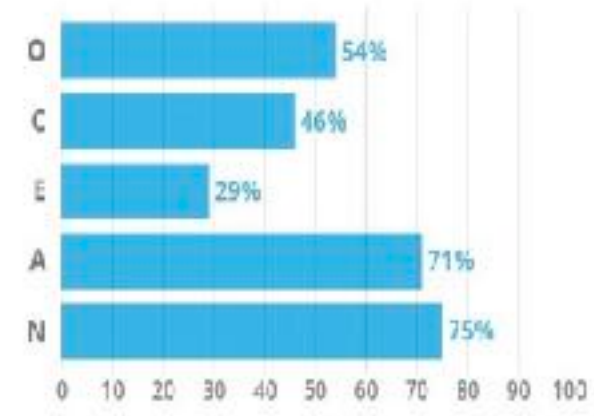
- Auditory: 45%
- Visual: 30%
- Tactile: 25%



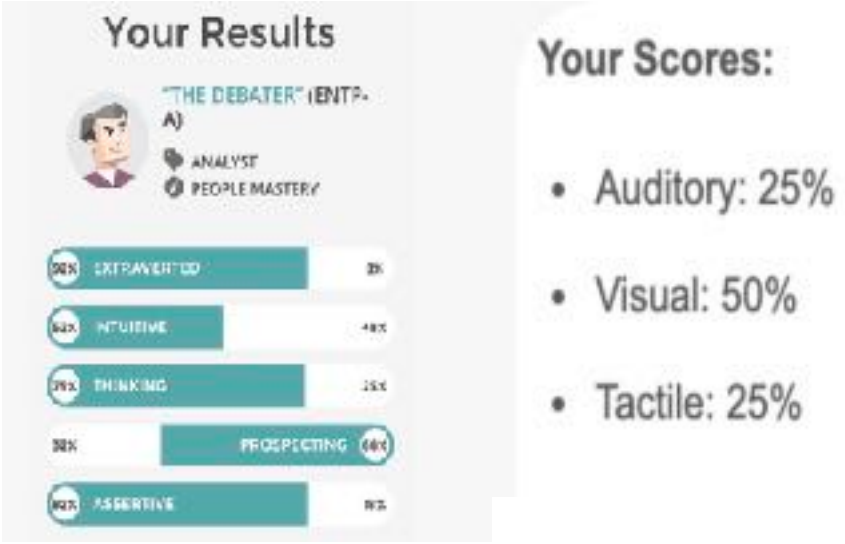
Basil Lilovac:

Basil Lilovac's scores:

- Auditory: 25%
- Visual: 25%
- Tactile: 50%


O
C
E
A
N
54%
46%
29%
71%
75%
0 10 20 30 40 50 60 70 80 90 100

Zhenghui He:

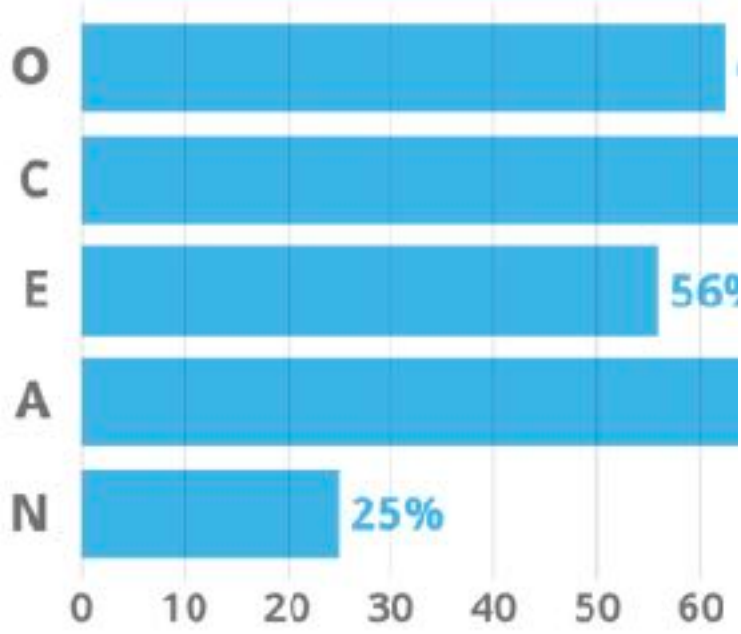

Your Results
"THE DEBATER" (ENTP-A)
ANALYST
PEOPLE MASTERY
EXTRAVERTED
INTUITIVE
THINKING
PROSPECTING
ASSERTIVE
Your Scores:
Auditory: 25%
Visual: 50%
Tactile: 25%


37%
INTROVERTED

Junquan Chen

Your Scores:

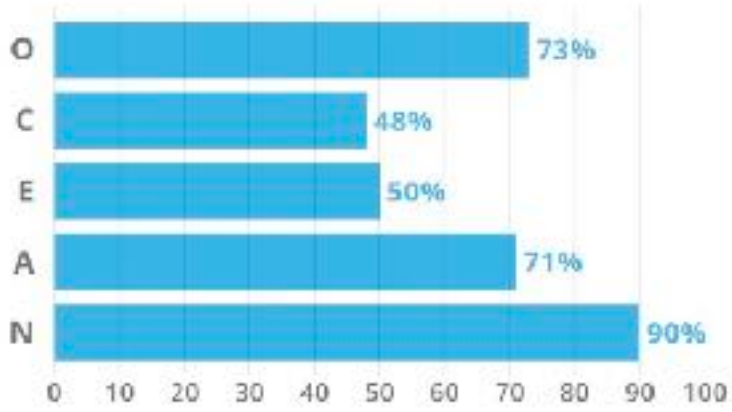
- Auditory: 35%
- Visual: 30%
- Tactile: 35%



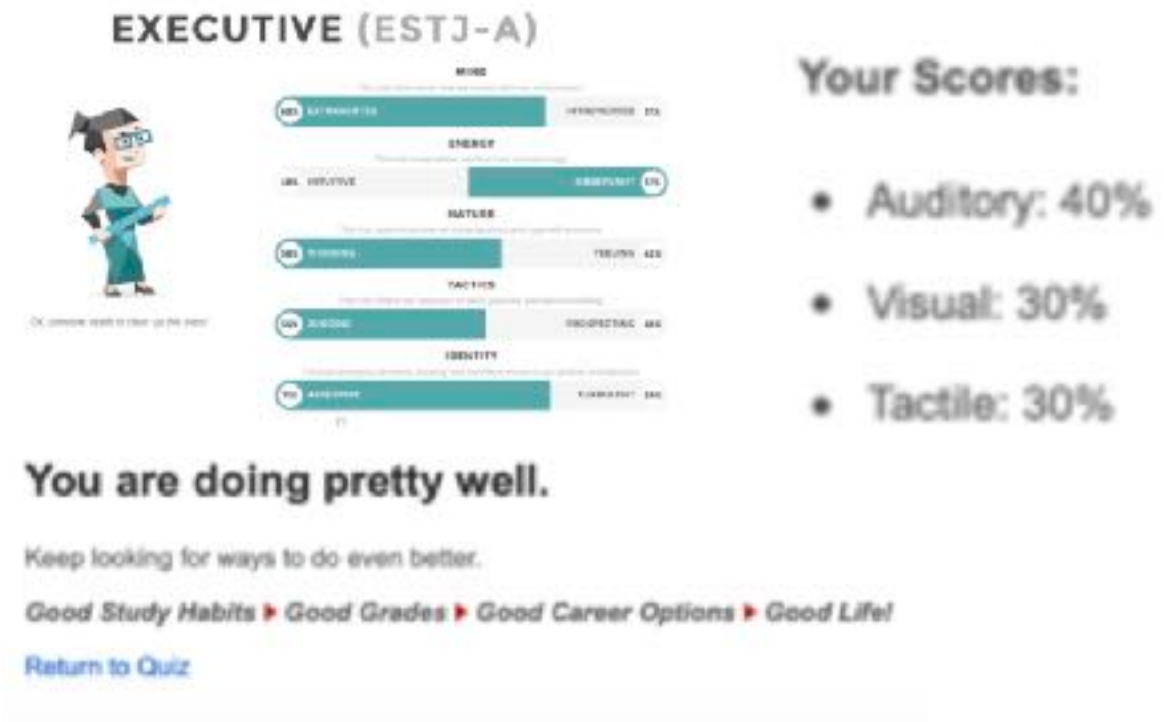
Yahoo Tang:

Your Scores:

- Auditory: 30%
- Visual: 40%
- Tactile: 30%



Jialiang Gong:



In this team, according to the information, Xuyi Wu's Intuitive and logical thinking will indeed be quite helpful and as an extraverted character who will not easily judge things, Xuyi Wu seems good to take responsibility on organization and coordination.

Basil Lilovac, according to the data, seems to be introverted but will have a strong ability to solve problems and creative enough to handle the complex works. What's more, a plan will be very important for him so it will be very helpful to have a detailed plan at the very beginning.

Hui Li also seems to be good at taking responsibility for work and will also be very organized. He will spare no effort to perform their duties and obligations and seems to be very reliable. He will also be a good choice for an important and phased task.

Zhenghui is good at communicating and organizing the group, being observant is also a strength for him to work as a team-to-team communicator. It is believed that he will also adjust to the team atmosphere when necessary.

Junquan Chen tends to be introverted and speechless but it will get better during the time. What's more, he tends to be very responsible and kind which means he will finish his tasks on time and if possible, he will give a hand to other group members.

Yuhao Tang tends to be very careful and strategic and seems to be good at making decisions. He can find the problem from all angles which will be quite helpful in the team.

Gong Jialiang got an average evaluation, with just a slightly higher evaluation on the extraverted part and assertive-character, he seems like a good member on communicating between members and helping to make decisions. On the other hand, he is also good at helping make plans.

Ideal Jobs

All our ideal jobs are IT related and have good salaries. They all require the employee to work in a team and master at least one programming language, some of them also require the employee to have working experience.

However, although our Ideal Jobs are all IT related, they are in different specific areas like data consultant, SQL developer, software engineer, game developer, web developer and so on. Their working environments are different, some are in the office, some are in the studio. The computer language required at work will be different. For SQL developer, it will be SQL. For a software engineer, it will be JS and for the HTML5 game developer, it will be HTML5. What's more, the required tools will be different. For web developers, it requires some web framework and for programmers, it will require some programming tools.

Most of us plan to become a programmer after graduation but some of us are not interested in programming and want to develop in other directions like being a consultant or other positions which don't need programming.

Tools

Link to group's website: https://kretous.github.io/Group-Web/

Link to group's Git repository: https://github.com/kretous/Assignment2

Most of the report was done on Google doc and Integrated by Xuyi then uploaded to GitHub so there's only one contributor on GitHub.

Industry Data

Xuyi Wu	Game Developer - Unlisted
Hui Li	Senior Software Engineer - Ranked #16
Basil Lilovac	Business Analyst - Unlisted
Zhenhui He	Front End Developer - Ranked #6
Junquan Chen	Microsoft SQL Developer - Unlisted
Yahoo Tang	Consultant - Unlisted
Jialiang Gong	System programmer - Ranked #4

IT-specific skills

SQL - Ranked #1
SSIS (SQL tool)
SSRS (SQL tool)
SSAS (SQL tool)
JavaScript - Ranked #2
VueJS(JavaScript framework)
JAVA - Ranked #3
Graphic Design - Ranked #10
C# - Ranked #12
Responsive designs (Website production) - Ranked #17
SEO (Website production) - Ranked #17
HTML5 - Unlisted
jQuery - Unlisted
CSS - Unlisted
SCSS - Unlisted
Photoshop - Unlisted
Flash - Unlisted
Adobe InDesign - Unlisted
PHP - Unlisted
Power BI - Unlisted
Angular - Unlisted
Confluence - Unlisted
JIRA - Unlisted

General skills

Communication Skills - Ranked #1
Problem Solving - Ranked #2
Organisational Skills - Ranked #3
Writing - Ranked #4
Team Work - Ranked #5
Detail-Orientated - Ranked #8

Time management - Ranked #12
Analytical skill - Ranked #17
Self-propelled - Unlisted
Conduct interviews - Unlisted

The three highest ranked IT-specific skills which are not in required skill set

1.Microsoft Windows - Ranked #4
2.Project management - Ranked #5
3.SAP - Ranked #6

The three highest ranked general skills which are not in required skill set

1.Troubleshooting - Ranked #6
2.Planning - Ranked #7
3.Creativity - Ranked #9

Opinion:

Xuyi: Nothing has changed, cause being a game developer is my dream as long as I can make my own games.

Herb: Becoming a front-end engineer or web developer is my goal. Because I have a personal introduction in design. I have design experience and it seems to be a good job for this job.

Basil: Nothing has changed, I still want to be a business analyst because I'm passionate about both IT and business and nothing else interests me.

Yuhao Tang: There will be changes. I think the job of consultant is a short-term choice. It is more like the first job after graduation. I hope it will be a job with more professional knowledge in the future

Hui Li: I don't think I will change my ideal job, because I think it is very fun to write code. Whenever I finish a code, it will feel very fulfilling when I run it.

Jialiang: Nothing changed. Because programming is the way of communicating between people and machines, I believe that this kind of communication will become very common in the future, and we will be the first people to do this kind of communication. BTY, computer is the strongest tool for human beings, I want to use it well.

Junquan: I don't think I will change my ideal job because I'm still interested in database, which will encourage me to learn more skills and knowledge.

IT Work

Our group interviewed a programmer who has been working for ten years and now serving as CTO in Teleopti. He told us some experience and gave us some useful advices.

Q1. Please tell us about your IT work. What exactly do you do?

A1: I'm a programmer, in more detail, workforce management system-full stack programmer. As a programmer, my job is mainly about software requirements, development, testing, operation, maintenance, QA and others. Workforce management system-full stack programmer.

Q2. What other kinds of work do you have to do?

A2: Most of the time writing code but communication is also demanded, I need to communicate with my boss and the users and try my best to understand their needs.

Q3. Who are all the different people you interact with in your work? Please tell us about them.

A3: As I said, I need to communicate with the users and my boss but most of the time I only interact with the Operations Engineer, Operations Manager or Product Manager.

Q4. Please tell us about your interactions with other IT professionals.

A4: Product Manager - know about customer needs and discuss business logic; Agile Coach - stand up meeting story and bug assign; SQE - verify feature & bug; Other programmers - code review, discuss and help each other.

Q5. What about your interactions with clients or investors?

A5: Technical Lead- helping tricky bug, refactor, best practices; Devops Engineer- monitoring build pipeline, e.g. Build, CI、CD; SQE- test, verity bug & story deliver by programmer; Programmers in team-codeview, mobbing, discussion; Programmers in other teams- helping each other, technical discussion, online meeting.

Q6. What aspects of your work do you spend most time on? Please tell us about these.

A6: Most of the programmers spend most of their time in the computer room and office, writing code and debugging.

Q7. Which aspects of your work do you find most challenging?

A7: As a programmer, most of the time, the most challenging thing is debugging. Another thing is technological innovation, because the times are changing, technology is always updated, pressures from competitors force you to innovate to keep up the time.

Q8. Can you share an example of the work you do that best captures the essence of the IT industry?

A8: Understanding business logic.

Q9. Finally, do you have any good advice for us?

A9: This depends on the direction you choose, but one of the more important things is that you should learn the basics and working in this industry, you should keep learning since the time is changing, If you stop and do not progress, you will be defeated by your competitors quickly.

IT Technologies

Blockchain and cryptocurrencies

You may or may not have heard a lot of stories about Blockchain, and blockchain is like the development of the Internet in the 1990s, when, who knows what the Internet was? As long as the company is on the ".com "domain name, a rush. Until the bubble bursts; In those days, it was the "shovel sellers" who really got rich. Since then, the Internet after a decade of the downturn; After a few more periods, it eventually led to changes in various fields, causing social, economic and cultural innovations. The Internet solves the problem of ‘information’ asymmetry and delivers information. Blockchain solves the problem of "trust" and delivers ‘value’. Blockchain is a growing list of records, called blocks, which are linked using cryptography. Each block contains a cryptographic hash of the previous block, a time stamp, and transaction data . A cryptocurrency is a digital asset designed to work as a medium of exchange that uses strong cryptography to secure financial transactions, control the creation of additional units, and verify the transfer of assets. Cryptocurrencies use decentralized control as opposed to centralized digital currency and central banking systems.To describe the role of blockchain in one sentence is "where there is a lack of trust, blockchain can play its role”. It has three characteristics: decentralization, anonymity and information tampering. So what it can do, at the end of the day, is it can solve the trust problem. To take A realistic example, I bet with A on the NBA championship, I said warriors, A said Cavaliers. But I doubt A's bet. I'm afraid he'll walk away if he loses. Did not expect A bite back, but also suspect that my gambling is not good, it is simply ridiculous! Then we need a trusted third party to act as a notary. We can each give twenty dollars to a notary whom we can trust for safekeeping. If the warriors win by then, $40 is mine. If the Cavaliers win, $40 goes to A. Final series

ended eventually, notary rolled a huge sum of money 40 yuan ran. The solution to this problem is to write an intelligent contract.
The contract code looks like this:

```
Result =NBA official website api.get ('finals')
If (knight wins)
  Pay 40 to A
The else
   Pay 40 to B
```

We put the code into the blockchain and execute it, and the blockchain is like an untrusted trust that just executes the code. The game comes out when the code is executed, nobody gets paid, and we all get rid of the mistrust.

Blockchain technology should give birth to cryptocurrency. Blockchain is the technical basis, and digital assets are the incentive mechanism based on blockchain. The application of blockchain technology needs the incentive of digital assets, and the development of digital assets must also rely on the breakthrough and application of blockchain technology. Blockchain and cryptocurrency are like wood and wood products, and bitcoin is by far the most successful example of cryptocurrency. At the same time, bitcoin also is the most successful application of blockchain so far, because it can be transmitted through the Internet in an environment of zero trusts. Without bitcoin, even now, it is not easy for an Australian and an American to exchange money with each other without a centralized bank. The most practical application of blockchain at this stage is speculation/finance/gaming/ gambling. For the application of the physical industry, it is still uncertain, because the development of blockchain may be rapid, in the near three years it may be applied in property registration/justice and anti-counterfeiting/food traceability/medical education and so on.

The development of blockchain needs to be based on the trust between people. The best time for the development of blockchain is to achieve complete trust, which is almost impossible now. In addition, policy support between different countries is needed for the blockchain to have an environment for development. The great thing about blockchain is that it never corrupts, it's completely transparent, and it can bypass any kind of censorship. In other words, blockchain makes people work more efficiently with each other, but it's built on mutual trust. Cryptocurrency is a product of blockchain, it's a futuristic currency, and at the moment, most people are questioning its security and its future. It's just a digital currency, and cryptocurrency is hard to counterfeit because it USES cryptography to ensure security. These are the decentralized systems of blockchain technology. None of this is issued by any central government, which in theory allows it to operate without any interference from anyone, including the government. Cryptocurrencies are more like a currency of the future. It can provide equal services for different people, embodying the fairness of cryptocurrency.

If blockchain can be developed, it will be closely related to our life. The art industry: artists can use blockchain technology to claim ownership and issue Numbers. It also includes a marketplace where artists can buy and sell through their website without any intermediary services. The legal profession: traditional fair play will be a thing of the past, with all academic credentials placed on the blockchain, redefining how diplomas and student certificates are handled and used. Development industry: 'token' assets, like cryptocurrencies, can be set in various states and types to trade among wallet holders. Real

estate industry: it can make the whole industrial chain process more modern and solve all kinds of problems faced by everyone involved in the real estate industry. Internet of things industry: it can greatly reduce the operating cost of the Internet of things. At present, the Internet of things basically adopts a centralized architecture. Blockchain technology provides point-to-point direct interconnection management for the Internet of things, and various instructions are transmitted through the blockchain, which is more efficient. The application of blockchain represents the transparency of everything. Just like the relevant certificates in the legal industry mentioned above, whether you want to determine whether it is a fake certificate, or whether the lawyer really has the qualification, blockchain can make it transparent. The other is peer-to-peer transactions, like in the art industry, between artists or between buyers. Blockchain can make it safer and more flexible. You don't have to worry about buying fake goods anymore, or artists worry about the buyer's money not getting paid. Blockchain technology makes all walks of life more convenient, it is a future technology, wood to have certain limitations.

If blockchain is widely used in the future, it will be just like the Internet. People just need to enjoy the convenience and efficiency it brings to us. For me personally, IT will be closely related to my life, because I majored in IT and I will also be engaged in related work in the future. I will be exposed to the Internet of things. Blockchain can make the Internet of things more efficient, which is an innovative technology and the whole industry may be greatly changed. In addition, with the development of the network, all kinds of data need to be protected. The protection of personal data is very difficult. For example, SONY and Yahoo have been attacked countless times by hackers. A large number of personal accounts have been leaked, which represents a serious defect of the system. There are only public and private keys in the transaction, which ensures the security of the transaction and enables me to trade with confidence. For everyone, it improves the quality of life, makes the work between people more trust, more efficient.

References: Wikipedia.com. (2019). [online] Available at: https://en.wikipedia.org/wiki/Cryptocurrency#Formal_definition [Accessed 1 May 2019].

Autonomous Vehicles

Nowadays, the cars became more and more advanced. There are more and more electronic screens in the car and the touch screen as well. Also, the emergence of battery cars shows the rapid development of science and technology. However, since the battery cars and technology developed, people start to consider how to ‘eliminate’ the driver. This developmental process is inevitable, autonomous driving has gone from ‘maybe’ to ‘absolutely possible’ finally, to ‘inevitable’. Autonomous vehicles are also called self-driving cars, as the name implies, this kind of car is driven by computers. This kind of scene usually happens in science fiction movies, but there have been many successful cases in our real life, such as Tesla and NIO. Future is coming. More and more car companies are starting to research technologies which related to autonomous driving. Self-driving is becoming a trend. For example, companies like Tesla, Uber and even old mainstays like Ford, they all have several prototypes in the field (self-driving technologies). Some people say future is already here because there are some cars on the market that can achieve self-driving even just in some certain situations. For instance, the cars which belong to Tesla are able to drive for hundreds of miles in the highway and stay in the lane which is quite hard for new driver.

Also, as we all know, fatigue driving, traffic violations and other phenomena occur from time to time in the highway. But there are no traffic lights, no obstacles and the car is fast where is a good place for self-driving. Self-driving cars don't change lanes randomly so it can effectively reduce the probability of traffic accidents and avoid the problem of driver fatigue as well. What's more, Unmanned delivery vehicles have been practiced in daily life. These cars are always found in safe, low speed and low risk environments such as schools, residential areas and industrial parks. The reasons why the unmanned delivery car could be on the road are those lines are very uniform and the maps are accurate. In addition, some companies (Uber) are already using driverless taxis. It is very convenient which helps the company to effectively eliminate a large number of labour cost, and it provide operating profits and reduce passenger travel costs.

At present, the functions and modes of autonomous driving are relatively single, a lot of functions can only be implemented on roads with simple road conditions. In the future, after 3 years, the levels of self-driving car will be able to up to level 5 which is the top level of autonomous driving. In level 5, the steering wheel became an available option for the car which means an autonomous vehicle can drive on the road without a steering wheel. Also, driverless buses will be achieved as a trend to change the public transportation. Each bus has a fixed route and fixed time. Dedicated bus lanes can greatly increase safety. What's more, the number of car parks will decrease, and the place will be used to rebuild more useful facilities. However, the laws related to autonomous driving will be determined and implemented. The knowledge about autonomous driving will also be popularized to let people know that it is safe to trust technology. Talking about the technologies that made autonomous driving become true, in my opinion, there are 4 main technologies. First of all, artificial intelligent is significant in self-driving. As a driver, the computer also needs to learn how to drive and recognize the sign on the road. Also, the cloud is important as well. The reasons why AI can keep learning is because cloud. The cloud is continuously accumulating training data. The more instances of driving that can be stored in the cloud, the better to train self-driving cars to navigate public roads. What's more, the accurate map and GPS in cars system are the indispensable reasons why the car can arrive at the destination accurately. In addition, radar is like human eyes to identify obstacles and other vehicles near the car, to avoid traffic accidents in time.

When the technology of autonomous driving becomes very mature, it will lead to a bad situation for driver. They will face the possibility of losing their jobs. The advent of driverless cars has made car-sharing be possible. It will create a new business model. The car market will change dramatically after the popularization of driverless cars. When people need a car, they can take out their smart phones and call a car to take them to their destination. Therefore, private cars will become unnecessary and people will gradually not buy cars. The traditional automakers may be forced to build self-driving cars or shut down because they can't handle the pressure of low profits. Also, self-driving cars may make some professions disappear, such as Taxi driver and traffic police. People can spend less money to call an autonomous car which is safer and cheaper than taxi. Self-driving cars have precise positioning and navigation systems that will automatically avoid congested roads. So, there is less need for traffic police to maintain traffic conditions. However, self-driving cars can greatly reduce the probability of traffic accidents. As a result, about 1.25 million people die each year in traffic accidents around the world. People are not machines, so there are a lot of external factors that can cause people to be distracted while driving. For example, people cannot keep driving for more than 4 hours, it is easy to lead to a fatigue driving. The most

likely cause of traffic accidents is driver fatigue driving. When driver felt tired, they cannot respond instantly when special occasion happens, let alone making right reactions. But autonomous car is a good way to avoid this problem. Self-driving cars have the power to react dangerous situation, it can immediately start breaking when the car senses risk. Autonomous vehicle has extraordinary senses because of radar and camera.

In my point of view, I have a driver's license so I know how to drive, and I think I can drive safe. I've heard some information about self-driving cars and some short video. When I first heard about autonomous driving, I felt it was amazing. I'm imagining the scene where the driver is not seated and the steering wheel is turning by itself or the driver seat in front of the steering wheel who is reading book or sleeping, but the car is still moving safely. I'm a new driver so I still have some interest in driving, so I'm not going to use this technology very often. But self-driving is a good choice when I'm driving on the highway and landscape. When people who is driving on the highway cannot distract, because they need to keep the car stay in the lane and pay attention to the speed. People are easy to be tired when they are focused, especially for driving a long time. Also, when people drive through scenic areas, the beautiful scenery will attract them to stop and look at it for a while. But it will cause traffic jams easily. Therefore, self-driving can help for this situation. User can set the speed and route, so they can enjoy the scenery without causing trouble to the traffic. That's the reasons why I will try autonomous driving. In addition, as far as I know, self-driving cars are generally electronic cars, this can well reduce carbon dioxide emissions and further improve the environment, also slow down the rate of global warming. I think the last generation will have a hard time to accept self-driving cars. Young people are easy to accept new technologies. So, I think the knowledge about self-driving needs to be popularized.

Cybersecurity

As time has gone on, computers and the internet have become a big part of not just individual citizens lives it has also become a big part of the lives of the world. The history of cybersecurity goes back to a research project that was done by a man named Bob Thomas, he realized it was possible for a computer program to move across networks. Ray Tomlinson, the man who invented email liked this idea and decided to make the program self-replicating and thus the first computer worm was created although he then wrote the first antivirus software to help delete the worm. Cyber security refers to the protection of technology from cyber-attacks or unauthorized access by outside users. As technology has become more accessible, threats like hacking have become more prevalent. Cyber threats to people include a wide range of techniques, Malware is a popular way technique used by people which is software that is designed do whatever the creator wants it to do. Another popular technique is a trojan which is malware that is disguised to look like legitimate software. These cyber threats can happen to anyone if they are not prepared and that's where cybersecurity comes in, as cyber threats have increased the need for cybersecurity has also increased. The most vulnerable people to cyber threats is small business owners according to Hiscox small business cyber risk report 47% of businesses have suffered at least one cyber-attack in the last 12 months. This is to be expected because small businesses most likely won't invest too much money into securing their information which makes them vulnerable to cyber-attacks while large corporations can invest large amounts in protecting all their information. A data breach could be the end of a company because not

only can it cost the business their money it can cost them their customers and reputation and in business your reputation is everything because without it no one will want to do business with you. Data breaches have become so common now that it seems like every other day there is a new story out about companies being hacked and information being leaked so small businesses need to understand that the investment into cybersecurity and protecting your data is worth it.

A lot of new technologies are on the market that can help businesses in protecting themselves against cyber threats such as outsourcing your cybersecurity, this is a popular decision for businesses because it's better to have protect your business from cyber-attacks than having their business destroyed because they were attacked.
Not only business has to protect themselves against cyber threats but also anyone that is connected to a network and that has sensitive information needs to protect themselves. For individuals the best cybersecurity is simple and most likely have been heard about. One type is having a strong password, these are extremely important because passwords are meant to protect your information and one of the most common ways that a hacker can break into a computer is by guessing simple passwords. Another type is using antivirus software, a computer that is connected to the internet or not is still vulnerable to cyber-attacks and antivirus software can help protect against those attacks. Antivirus software helps protect your computer against a host of cyber threats such as worms, trojans and malware. The common types of cybersecurity include network security, data loss prevention, cloud security, identity and access management use and intrusion detection systems or intrusion prevention systems.

Cybersecurity analysts protect networks from cyber threats, they provide information to businesses and people on how they can better protect themselves against cyber threats and implement security measures to help guard against those threats. These cyber security analysts are highly important for society because they protect all our most vulnerable information for example financial details or sensitive military information, all this information could be dangerous in the wrong hands. As more of our information is kept in one place it becomes more vulnerable to theft and as technology develops over time so do the threats against technology, that’s why cybersecurity must adapt to the new threats that come our way. Just imagine the chaos that would happen if we did not have cybersecurity, everyone’s private information could be exposed, or god forbid people lose their lives. According to Elon Musk, he expects that by the end of 2019 we will have self-driving cars, now could you imagine the mayhem that would happen if someone were to hack into the cars driving system, they could kill someone or what if a hacker got control of launch codes for nuclear weapons? These threats are not just information theft but also life or death situations. As cyber-attacks grow there will be a high demand of cyber security jobs, according to a report by Cisco, cybersecurity job openings are expected to grow globally by 6 million by 2019. Cybersecurity is said to be one of the most secure career options available. According to the Bureau of Labor Statistics, the job outlook for IT security analysts from 2016-2026 is 26% which is faster than the average. Cybersecurity jobs are also very broad, and you can work in a variety of industries such as military and government or the business sector, also there are a lot of different titles that are in cybersecurity and these include cybersecurity architects, engineers or consultants.
Cybersecurity affects me all the time, I use a wide range of technologies and they all have sensitive information such financial details or confidential private information. Almost

everything I do is connected to a computer or device such as when I communicate or do shopping online, without cybersecurity I couldn't be able to make my life easier and more efficient. Without Cybersecurity hackers could steal all my bank information, I could also have sensitive private information such as photos or text messages leaked causing public humiliation. Over the last few years there have been hacks against celebrities and they have had explicit photos leaked, and that just shows that not cybercrime is not just used to steal money from people but also to humiliate them. The most vulnerable people to cybercrimes is elderly people, they are most vulnerable to scams and the biggest scams are email scams. These email scams can work in a variety of different ways, a scam that is really popular is the Nigerian prince scam this scam works by tricking elderly people that they are distant relatives of a prince that has passed away and that has left a fortune to them, these scams are very vicious because they prey on elderly people who next to children are the most vulnerable people in our society. Also, kids can be vulnerable to cybercrime as well, nowadays kids before they get to high school have mobile phones, it is a big part of their lives and they don't have the knowledge or experience with cybercrime to help them guard against it. As technology advances cybercrime will become more sophisticated and efficient and that's why cybersecurity will always have a large market share because it will always be needed by anyone and everyone even people who don't use computers because the cyber world is always changing and updating and sooner or later you could be attacked.

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Robots

Robots are machines that can carry out complex actions that have been programmed. As time has gone on, we have been able to program robots to do more and more complex things. Robots have always been around in society even though we didn't understand them, robots are said to go back all the way to the ancient times of Greece. Most robots are made from 3 parts the controller, the mechanical parts and the sensors, the controller is a computer that is kind of like the brain for the robot it commands the robot perform the action that is inputted. The mechanical parts are basically everything the robot is made of such as the motors or gears and these are very important because they make the robot move. The

last part are the sensors, and these let the robot know of its surroundings and it helps the robot determine things like the size of things and the location of things. Without the mechanical parts, the controller would just send a command and the robot couldn't do anything, vice versa without the controller the robot would not know what command to fulfill and without the sensors the robot couldn't detect where things are placed, all the parts must work together as a team to make the robot work. At the end of the day robots are very limited because they are unable to think for themselves and therefore are limited to commands programmed by humans. Robotics are now also being used for competitions, there are popular videos online of robots fighting in competitions or robots competing in races, this just shows how robotics has become really accessible for people and that they can make their own robots when you used to make robots it was very time consuming and expensive. One of the best uses of robotics in my opinion is robotic prosthetics, the most cutting-edge robotics technology allows people with amputated limbs to control a robotic prosthetic the procedure done is called targeted muscle reinnervation. Another wonderful use of robots are powered exoskeletons, this is a machine that allows you to carry heavier objects uses for this could be military use because they carry large loads, and this could help them carry that load while also helping conserve their energy another use for it is also medical and this can help with people that have lost use of their legs or it can also help in rehabilitation and therapy of people that have been in accidents. Our most important robots do not speak or look human like, the most important ones we rely on just simply fulfill a simple purpose such as robots used in automotive factories to create cars. We have become so reliant on robots that we would not be able to do certain things without them; some include military uses such as drones and search & rescue robots. Others include like what I mentioned before the car production industry which is strictly dominated by robots and if they were to go away the prices of vehicles would go up and possibly the quality would go down because humans are prone to mistakes while robots are not as much.

Robots will have an immense impact; the biggest impact being felt in the labor market. It has been stated that up to 800 million global jobs will be gone by the year 2030 and be replaced by automation. The use of automation will bring both pros and cons, because automation is much cheaper and efficient goods and services will most likely be cheaper although a large amount of the workforce will be displaced. The people most affected will be low skilled workers because they will effectively be made redundant, right now there are tests for automated trucks and in the US 3.5 million people are truck drivers what will happen to them after they are made redundant? Another industry that is impacted is the fast food industry, when you go to McDonalds now they have the self-service kiosks which allow you to order by yourself without having to talk to someone what will happen to the people that used to fulfill that job? The introduction of self- driving cars could also destroy the taxi industry because there would be no need for taxi drivers. A positive could also be that robots are able to perform medical procedures more effectively and efficiently than humans and, in the process, could save countless lives. Robotic engineer employment is expected to grow by an average of 5% from 2014-2024 which is not that much depending what other occupations your comparing it to. Reports have also said that robots and AI (Artificial Intelligence) will create more jobs then they take, because prices of goods and services become cheaper there will be more spending in the economy therefore new jobs will be created. I believe that this is a strong possibility because before automation was implemented studies showed that automation would be a revolution and that we could never recover from it. The introduction of robots will change everybody's lives because no matter what you will be connected to

them from the machines you use at home to the goods and services you purchase that is made by robots. There are always winners and losers and for the winner’s robots will make their lives better and for the losers’ robots will make their lives harder.

Robots personally will affect be greatly, in my daily life robots will improve my quality of life from prices lowering or self-service kiosks which make my time more efficient and effective. As time goes on and robots become more advanced, they will become more a part of my everyday life because they are able to perform more tasks much more efficiently than I am. I can’t wait to see the introduction of robots that can be of great benefit to society. Robots will soon affect the way I am transported because of self-driving cars; robots will soon affect the way I am cared for in hospitals due to robots also being in hospitals, the possibilities are endless. Robots also will affect my career options because certain industries will be strictly dominated by robots, some include transportation, healthcare and simple paralegal and accountant. As robots can undertake more complex actions, some jobs will be made redundant by those robots and there is a growing fear in society that humans will not be needed anymore because robots will be able to mimic us. Although industries have been destroyed by robots, brand new industries are emerging such as cybersecurity and IT which I am interested in. Robots will have huge impacts on other individuals from robots being able to nurse patients and robots being able to teach classes. As for now I can say that if robots were to go away it would be harder to live without them but manageable but in the future when arguably robots will be around people everyday robots will become harder and harder to live without. Robots offer a new way of life for people; they offer an easier life so like all other technological advance’s robots will raise our quality of life while also possibly making us slaves to them because we become so reliant on them.

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Project ideas

Simulated driving learning system

The simulated driving learning system is based on artificial intelligence developed by software that allows novice drivers to improve their driving skills. There are many simulated driving systems on the market, but they only allow the driver to learn basic driving knowledge. Many drivers experience unexpected situations while driving. Sometimes it is difficult to make the right decision because they have not experienced it. The situation has already occurred, and this subconscious behavior may lead to more serious losses.

Car accidents occur every day around the world, but many car accidents can be avoided. The simulated driving learning system can be updated into the learning system by collecting emergency and accidents from drivers around the world. At the beginning of the exercise, the system will simulate the sudden situation of the road condition according to the driver's

driving habits, showing the driver's poor driving behavior and how to better cope with such accidents.

Most of the car accidents are caused by the driver's misjudgment. A small mistake is likely to cause a fatal injury. Panic takes up the driver's brain to make a wrong judgment, but when people have encountered the same situation, make the behavior of misjudgment is relatively reduced. When an emergency occurs, the driver uses the coping method learned in the simulated driving learning system, which may have a high probability of reducing the accident or reducing the loss caused by the accident.

In addition, this simulated driving learning system can also simulate different types of vehicles. The collected road conditions are adjusted according to the combination of vehicles selected by the trainees. Of course, heavy-duty vehicle drivers such as trucks can also use this system to improve their driving level. Accidents in heavy vehicles are often not caused by vehicle failures because the driver is not aware of the impact of the weight of the truck on the driving.

Of course, this idea sounds like a real driving game, but applying it to a part of forced driving learning will change the bad driving habits of many people, giving them the most profound experience, if people can pass the game. To improve driving levels and reduce losses and accidents, I believe many people will be happy to see this system applied to life.
Building such a simulated driving learning system may not be easy, and many techniques need to be applied, such as collecting sudden road conditions around the world and collecting car data, as well as establishing a more realistic driving scene for the driver experience, which may be more advanced. 3D modeling. The hardest part is how artificial intelligence makes the best judgment based on road conditions and vehicle information. Another question about human nature may need to be solved manually: When the situation occurs, does the driver choose to protect his or her life or protect the lives of others? Many people think that protecting more lives is the first choice, but when things happen, I believe most drivers will choose to protect their lives. This is the problem that the system needs to solve most.

Group Reflection

Xuyi Wu

What I want to say is, this may not be the best team, but it is the most united group I have ever been a part of so far. Honestly, I have never liked teamwork before, and I can even say that I hate it, since there will always be someone who doesn’t want to do anything or just doesn’t want to work hard. I’m even used to make the worst plan from the very beginning, this time either. However, even though we are a team of seven this time, everyone took active part in the assignment, which is really amazing. I handed over the parts to my teammates without any trepidations and everyone was so active that there was even someone who complained to me that there were too few tasks for him. Of course, I’ve tried my best to make everything good, I built up the website, wrote the team profile and Industry data. I’m also responsible for coordinating, holding meetings and monitoring the progress of the assignment. One thing I think should be improved is that the communication within the

group is still a little less, most of the members seem to be shy and although I think I know each of them well, they still don't know each other very much. What really surprised me is that Anthony will quickly return to the email no matter how late, so dedicated! What I have learned about the groups is that everyone has their own strengths and will perform very well in specific situations.

Hui Li

Through this team task, there are some positive aspects and some negative aspects for all of our members. First of all, the good thing is that everyone did the best to complete what they had to do. Then, at every face-to-face meeting, the members went active. Secondly, our members were helping each other and encouraging each other, and we have a good leader. He will clearly distribute the parts we have to do, let us know that each of us should Going to do something. On the other hand, there were still some negative parts. What we should improve is that many times we were discussing the problem in chat software, so we should have more face-to-face meetings because sometimes only face-to-face discussions can find the key to the problem, so that it can be better to complete the task, instead of always using chat software to discuss. One of the most important things I learned in this team's mission was how other team members think and how to do things.

Junquan Chen

First, I finished one of the IT technology reports and my personal information and uploaded My Profile as well. I attended our first meeting that we distributed each task in Assignment 2 to each person (we asked them to make sure they can do it). The members who attended the meeting had the opportunity to pick the tasks they wanted to do, so I picked the Autonomous Vehicle in the IT technology to write the report. The meeting was on April 18th, the reason we had it was so each of us could know our tasks before the break, so I can have enough time to do this. However, I started to do my part on April 29th and finished on May 1st, hopefully I did not drag my team's feet. Everyone finished their own job on May 2nd which means we had 3 days left before due day. I am very grateful to all the team members, no one complains about their task and no one fails to finish the task within the specified time. Also, everyone is willing to help each other which is the best thing in group work. In addition, I'm appreciated with our leader Wu who scheduled the time and place for the meeting. What could be improved is that A meeting with everyone present will be better. One thing that was surprising was that no one was lazy? (lol) One thing that you have learned about groups is that communication with teammates is important.

Well done guys!

Herb

In this group work, I think we did very well and very efficiently. I learned a lot after working in this group and I found that something needs improvement. First, the members of the

organization are very active. Most members will present their opinions and correct each other's ideas. Secondly, our team leadership work is very well done, and everyone's task assignment is very reasonable, which makes our team members very satisfied. The point is that each member can complete their tasks on time or even ahead of time, which surprised me. Through this task, I learned how to make the team work better. In addition, the work of this group I found out where our team needs improvement. The absence of all members during the discussion led to very limited ideas, and I felt that everyone should come up with personal ideas and refer to other team members, which would help to generate innovative ideas. On the other hand, when each member completes their respective parts, the members can assist in viewing the parts that others have completed and give suggestions to correct them, which is beneficial to the quality of the group's work. I hope everyone in this group can achieve good results.

Jialiang Gong

For the whole assignment period, firstly I joined in the assignment group meeting and was called to talk about the project ideas. I shared my opinions and thoughts and tried to connect the ideas from each of my group mates. I firstly felt nervous about sharing my thoughts in front of everyone. Then, I'm glad to see my group members listened carefully and exchange some experience with me.

My part of the assignment work is to find out the character of my group mates, summarize the results and separate the work to different people who should be good at. My mates gave me a lot of necessary help, which greatly increased the speed of my work. And during the work I found some points which need to improve.

Firstly, I found myself hard to use my time efficiently. I need more time to do the same work as others. On the other hand, I do think I need to improve my project ability. I found it hard for myself to do something which need deeper knowledge. Finally, I could not join the first meeting, which made me hard to deeply join the play. In the next part of the assignment, I do think I will be better.

Basil Lilovac

I really enjoyed the team I had, I wasn’t there when the grouped was formed and when I was looking for a group, I was welcomed with opened arms which was nice because I was nervous about finding a group. I thought the group was very good because everyone completed their assigned work on time, which was before we met in our tutorial session, we did that because we wanted to have time before the submission date to clean up and finalize our report which is important.

I did not do a good job of communicating with the rest of the group, my main source of communication was with Xuyi Wu he was the leader of our group and made sure everyone did what they were supposed to also we had a google doc so I could also monitor what has been done and what has not. The rest of the members in my group are

from China and English is there second language, I have been so impressed with everyone in the group because it must be very nerve racking to come here from china and learn a new language. My tasks for the assignment were to complete 2 IT technology reports and I chose cybersecurity and robots and because I am the only one in the group that English is my first language I also proof read the report and fixed any grammar mistakes. Overall, I enjoyed working in the group and although I spent most of the time doing work by myself, I am glad that I was a part of this group.

Yuhao Tang

The group work went very well, everyone was assigned the right part, and everyone had the same amount of work. The only thing that can be improved is that I think we should keep the group online when we are assigning tasks, which is beneficial to the average distribution. In addition, to my surprise, everyone can almost complete their own work in advance or in excess. Everyone can help the group, and I won't be afraid to try the parts I haven't done before because I don't know much about the computer, which is very happy. In the beginning, I thought it was a heavy workload, because it contained 4 articles, required interviews with professionals, made web pages, etc., which made me feel very difficult, but when everyone tried to share for the team, the workload was suddenly much less. Team spirit will make a huge amount of work in order so that everyone can do what they are good at. In the process of cooperation, I also learned a lot of relevant knowledge, such as how to interview a person and how to ask questions, so that the interviewee can easily answer the questions and get the explanation of the questions I want. Knowledge about many unknown fields, such as the future of self-driving cars and current technologies. The biggest advantage of teamwork is that we can learn from each other and make progress.

Group reflection

Everyone did quite a good job!

There were no complaints, no arguments during the whole process. Everyone had a clear division of tasks, worked actively, efficiently and completed their own parts on time. Whenever something happened, everyone responded very quickly, helped each other, encouraged each other and solved the problem in a very short time.

The Team Profile was almost completed during the first meeting, the rest part was finished by Xuyi Wu who knows the team best with the help of Jialiang Gong. Everyone was assigned the tasks that suited their abilities during the meeting as well. What was really amazing was that, the tests were so accurate that everyone really behaved the same as the test results said.

The group website and the Industry Data were done by Xuyi and when asking the team members for advice and opinions on the website, everyone actively expressed their opinions which was really helpful.

IT Technologies was done by Basil Lilovac, YuHao Tang and Junquan Chen. Basil did the Robots and Cybersecurity, YuHao did the Blockchain and cryptocurrencies and Junquan did the Autonomous vehicles. This part was really hot, everyone wanted to write something about their interests and 4 sections seems to be far from enough. There was even a dispute during the assignment of the task since Basil wanted to do all the 4 sections while other person wanted to do this part as well. Yuhao and Hui Li were both interested in Blockchain and cryptocurrencies and all wanted to contribute to the group. Finally, Hui Li made a concession since he had a friend who had been working in IT industry for more than ten years and it would be very easy for him to start an interview so he was responsible for the interview.

The Project ideas was decided during the second meeting and was the mix of all ideas which was Simulated driving learning system. This part was done by Herbert since his project idea was Automotive real-time projection system and the new idea was mixing other elements on his basis. Herbert also helped with the interview and with the help of him, we interview two IT professionals.

At first Jialiang Gong didn't get in touch with us, he joined us in the middle and actively participated in the tasks. Unfortunately, there were no remaining tasks that can be assigned to him at the time, but he still tried his best to help other group members.

The only thing which could be improved is the communication. Most of the group members tended to be introverted and it leaded to few communications in the group. Everyone was fully engaged in works and was so speechless even when sitting face to face. Finally, everything was done on time but Xuyi Wu, who was responsible for coordinating became the only person who knew each member well and obviously, it’s not so good.