I declare that in submitting all work for this assessment I have read, understood and agreed to the content and expectations of the Assessment declaration.

Table of Content

Team Profile

Team Name

Old Guy is our group name

Personal Information

In this section, we will introduce all of team members' background information

Trung

- Name: Hua Tien Trung
- ID: s3836390
- Email: s3836390@rmit.edu.vn
- Nationality: Vietnam
- Spoken language: Vietnamese, English
- Previous Education: 2015-2017: Le Hong Phong High School from Ho Chi Minh city
- Hobbies: novel, PC/Mac game and board game.
- IT interest: mobile app, web development.
- IT experience: basic web development skill (HTML/CSS/PHP), basic database related skill.

Anh

- Name: Tran Quang Anh
- ID: s3836276
- Email: s3836276@rmit.edu.vn
- Nationality: Vietnam
- Spoken language: Vietnamese, English
- Background: Formally a student of Viet Au highschool in HCMC
- Part-time game tester for numbers of indie companies
- Hobbies: Working with plastic model kits, keyboards building, gaming, reading, collecting arts
- Experience: Basic HTML and Python, Troubleshooting, Git/GitHub
- Interest in IT: computer assembly, software/service functionality

Dat

- Name: Nguyen Thanh Dat

- Student ID: 3870837
- Email: s3870837@rmit.edu.vn
- Nationality: Viet Nam
- Spoken Language: Vietnamese, English
- Education to date: 2016 - 2019: Le Quy Don High School for Gifted - Vung Tau
- Hobby: Reading financial, business books and playing basketball
- IT Experience: Basic Python, HTML, CSS
- IT Interest: Web Development, Cloud Services

Minh

- Name: Pham Hoang Minh
- ID: s3871126
- Email: s3871126@rmit.edu.vn
- Nationality: Vietnam
- Spoken language: Vietnamese, English
- Background: Finished High School at Thuc Hanh High School – Ho Chi Minh City University of Education , Studied Computing science in the Netherlands for 2 years at Radboud university.
- Hobbies: Reading, gaming, listening to music
- IT interest: Web development/ database/ cloud computing.
- IT experience: Basic Java knowledge, basic HTML/CSS

In this section, we contained all three results of the tests from the Assignment 1 and evaluate how those results may be helpful to the group

Trung

- Myers-Briggs test(MBTI): ISFJ-T / Defender
- Learning style: visual learner
- Big Five personality test: Openness 46%, Conscientiousness 48%, Extraversion 40%, Agreeable 60%, Neuroticism 67%

How does this affect my position in a team: I’m a talkative and quite helpful person (because I’m willing to and got the skill to help) in a group. I'm also open to criticism and is willing to change as long as it's a valid point. However, I'm not suited to be a leader because I can't be strict nor I can motivate others effectively (given my laid back mood). But as a fellow teammate, I believe that I can provide good support for everyone when they need help, whether it's about morale support or technical issues.

Anh

- Myers-Briggs test(MBTI): INFP-A / INFP-T
- Learning style: auditory and visual learner

- Big Five personality test: Openness 56%, Conscientiousness 35%, Extraversion 35%, Agreeable 60%, Neuroticism 77%

This information means that I am not very talkative but is someone who is willing to listen and analyze the value of others' ideas. I also can be so focused on what I'm doing, that I forget about what is around me. My personality can create a lot of problems and misunderstandings between members and it can also negatively affect the flow of the whole group.

Dat

- Myers-Briggs test: INFJ - Advocate
- Learning Style test: Tactile Learner
- Big Five Personality test: Openness - 83/100, Conscientiousness - 69/100, Extraversion - 73/100, Agreeableness - 71/100, and Neuroticism - 44/100

How these test results may be helpful to the group: I am very open-minded, which means that I can be a good listener and embrace all the ideas coming from any teammates in the group; but I also need some private spaces to refresh both inner and outer of my body. I am also very optimistic, and I believe that is a virtue that can cheer up my teammates when they hit rock-bottom. I have to admit I have not become talented yet in this IT field, but I am the type of person who is willing to learn everything to achieve my goals, which hopefully can inspire others to work together and come through obstacles. However, every coin has two sides, I can really easily get burned out and my idealistic vision might cause conflicts with others.

Minh

- Myers-Briggs test(MBTI): ISTJ
- Learning style test: Visual
- Big five personality test: Neuroticism: 70 (low), Extraversion: 66 (low), Openness to experience: 83 (high), Agreeableness: 80 (high), Conscientiousness: 75 (high)

The meaning of these results: I am open to co-operation, can work fairly well with others, so normal teamwork is no problem. I also take responsibility for my work and will devote time and effort to the final goal. The way I think is based on sets of rules and observations (logical). One important note is that I may get tense during stressful situations. This may lead to a tense environment between the member's interactions and myself. I also lack the passion required for abstract goals. These problems can negatively affect group workflow.

Tools

In this section, we included all the links to the website of our group website, the links to the website of each member from Assignment 1, and the links to our GitHub Repository and the Commit History of our Repository.

Group's website link

https://momoclouq.github.io/IntroIT_assignment2_group23/

Member's website link

- Minh
- Dat
- Quang Anh
- Trung

Group's Git repository link

https://github.com/momoclouq/IntroIT_assignment2_group23

Comments

Commit History link:
https://github.com/momoclouq/IntroIT_assignment2_group23/commits/master

Overall, all the members have a good contribution to the group works. The workflow is easy to follow and all the files/data uploaded were in good structure.

Industry Data

In this section, we will represent the data following the data supplied by Burning Glass to evaluate the ranking in popularity of our Ideal Jobs and the skills needed in those Jobs. After that, we work as a group to compare it with each other and with those most popular one in the data we had. Finally, we clearly state whether those figures affect our opinions about our Ideal Jobs or not.

Job titles and ranks

- Minh: Full-stack web developer
  Ranking: 16/25 (march 2018) - 18/25 (February 2018) - 14/25 (May 2017)
- Dat: Back-end Developer (PHP Developer)
  Raking : 24/25 (Mar 2018) - 20/25(Feb 2018) - No rank according to the database(May 2017)

- Quang Anh: Test analyst
  Ranking: 15/25 (May 2017) - 10/25 (Feb 2018) - 10/25 (Mar 2018)
- Trung: Full-stack web developer
  Ranking: 16/25 (march 2018) - 18/25 (February 2018) - 14/25 (May 2017)

Set of skills

- Minh
  General skills: Communication, Teamwork, Problem solving, writing, scheduling
  IT Skills: HTML, CSS, JavaScript, MySQL, Spring MVC, Java/J2EE, MyBatis, cloud-services API, website optimization techniques, Microsoft Windows.
- Dat
  General Skills: Communication Skills, Organisational Skills, Problem Solving, Teamwork/ Collaboration, English, Time-Management.
  IT Skills: Git, Website Production, JavaScript, Microsoft Windows.
- Quang Anh
  General skill: communications, Quality assurance and control, Detail-orientated, Troubleshooting, English
  IT skills: Customer service, technical support, HTML basic, Python, java, java script, C ,linux, Microsoft Windows.
- Trung
  General skills: Communication, Problem solving, Teamwork, Troubleshooting, English
  IT skills: SQL, Java, Javascript, Website production, Customer Service, Git, Microsoft Windows

Group: Some skills listed above are similar to the skills in the Burning Glass report. So we summarize the result for my team as:

1. General skills (team) and ranking:

- Communication: 1/25 (March 2018)
- Problem solving: 2/25 (March 2018)
- Teamwork: 5/25 (March 2018)
- Troubleshooting: 6/25 (March 2018)
- Organizational skills/planning: 7/25 (March 2018)
- English: 21/25 (March 2018)

2. IT skills (team) and ranking:

- Database (SQL, Oracle): (1/25 March 2018)
- Programming Languages (Java, Python, C++, etc): Java (3/25 March 2018)
- Microsoft Windows: 4/25 (March 2018)
- Git: 5/25 (March 2018)
- Linux: 13/25 (March 2018)
- Website Production (HTML,CSS,PHP): 17/25 (March 2018)

3. 3 highest ranked General skills not in the required skill set:

- Organisational skills: 3/25 (March 2018)
- Writing: 4/25 (March 2018)
- Planing: 7/25 (March 2018)

4. 3 highest ranked IT skills not in the required skill set:

- Project Management: 5/25 (March 2018)
- SAP: 6/25 (March 2018)
- Business Management: 7/25 (March 2018)

Individual thought after looking at the above data

Having looked at the Burning Glass data, has your opinion of your ideal job changed? Why or why not?

- Trung
  No, it's not. In my opinion, ranking job titles based on popularity kind of meaningless, at least for me. It doesn't show me which job has the highest income, brightest future or hardest time. It's just based on the population. For example, Back-end developer is a viable and good job but it doesn't even get listed by Burning Glass. I did have some doubts so I went to research more about IT jobs.I learnt that my ideal job ranking is low because it's a challenging job with too many things to learn and also hard to master, which is why it's not popular. Now, I can say that Fullstack developer is still my ideal job at the moment because of the income and challenges it brings, also the fact that I'm confident I'm capable enough to tackle these challenges.

- Quang Anh
  It doesn't change much in my very own opinion, although from the data that the burning glass data provided, testing seems like it isn't very popular.
  I think it is because in most employers' eyes almost anyone could do it, however I would argue that the effectiveness may vary due to each individual's personality and skills, some are better at logging, communicating and make good report on what went wrong or could have done better and some are more effective at technical skills and details like how much better it can be done or even a detailed report on which component can generate potential risk or even make the overall product easier to understand for other developers.
  And since every piece of tech that came out, a tester is always needed to test it out in many different scenarios and report what they have found to effectively minimize the problem and potentials of failures and since

figuring out how things works is a part of my hobby so the ranking doesn't affect much about how I see being a tester is not relevant.

- Dat
  My opinion is still the same towards my ideal job. According to the data, the rank of my ideal job as a back-end developer can be observed to have a descending trend. Although it did not have a high ranking about its popularity, I still love that job at the moment. The reason for this is that I choose my ideal job not because of its ranking in popularity. It can be not so popular when compared to other jobs but that is not the whole picture. My goals are having a high-salary job and the opportunity to work over-sea so the data does not affect my decision. Therefore, being a back-end developer can open up more opportunities since I can always find a company in any country that needs a back-end developer and the salary is also very interesting as long as you have a good performance at the workplace. The general and IT skills required to become a back-end developer can be acquired with hard work during the time I study at the RMIT University, so I can confidently believe that I will get a stable job as the Junior position after graduating and eventually become a Senior back-end developer.
- Minh
  No, web development is still my favorite aspect of programming. Reason: The changes in the popularity of web development(full-stack developer) are just a representation of the current trends in computer science, websites will exist until the end of the internet, thus web development is forever relevant. Furthermore, web development (or specifically full-stack developer position) is still a relatively stable job according to the data, which is good for me. The skills needed for full stack positions are also much needed overall, this makes the learning process easier to me. I cannot guarantee that this claim will hold for the next months or years, but I can say that at the moment, there is a website project in my mind that I want to create.

IT Work

In this section, we had carried out an interview with one IT Professional and report about what we have learned after interviewing him

The Interview

(Not 100% of the conversation, should be quite close though)

1. What kind of work is done by the IT professional?

It would depends on your company product (or service) and your role, as a Senior Software Engineer, you mostly writing code and communicating with others, following some industry standard protocol for software development like Scrum

2.What kinds of people does the IT professional interact with? Are they other IT professionals? Clients? Investors? The general public? It depends on the role, in general the higher role you take the higher chance you would need to communicate with the external.

Sample below, but it may not always true, some SA may don't want to work with clients

- Engineer: mostly working together

- PM: Partners, Clients

- Support/Helpdesk: Clients/Customers

- Solution Architect: Team, Client, Partner

3.Where do the IT professionals spend most of their time?

Writing code with well design

Communication would take about one-fifth of your time per day

Learning new things, blogs, articles

Contribute to Open Source software

4.What aspect of their position is most challenging?

If your job is writing code, then writing good code is the most challenging

If you mostly working with clients, then make them and your team happy is the challenge

5.Finally, can you share an example of the work you do that best captures the essence of the IT industry?

Not sure if I get the question but that is just too broad to get.

6. Oh, I mean is there any work that you have done that makes you feel like that's the most "IT" work?

Well, actually I got what you meant by the last question but I personally think that's a bit ridiculous to answer. I did the job for like 6 years and jumped across 4 companies (the first one is FPT and the rest are all foreign ones) and actually had to do a lot of things and mostly are coding. But even so, I don't think I did anything worth mentioning to "capture the essence of IT" and feel funny if somebody said they did. But if you really want one, I did got requested to contribute to an Open source on Github, that's a thing not many Senior coders from Vietnam can do.

What We Learn

After interviewing IT professionals (background information below), I have concluded the information as follows.

The IT works are actually different for each person depending on the company product and service requirement as well as the individual's role. Most of these works revolve around coding like writing code, reviewing code, interacting with clients and customers while following some industry standard protocol for software development like Scrum. In this case, as a Senior Software Engineer, his jobs are mostly writing code and communicating with fellow workers.

IT works always require you to interact with others. However, whom you interact with, really depends on your role in the company. In general, the higher the role you get, the higher chance that you would need to communicate with the external world (which is anyone outside of your co-workers). For example, you won't get to talk with the investors if you are only an Engineer. The following list of roles somewhat describe the interaction (not always true):

- Engineer: mostly working together

- PM: Partners, Clients

- Support/Helpdesk: Clients/Customers

- Solution Architect: Team, Client, Partner...

Most IT professionals spend their time writing code, communicating with others(which take about 1/5 of working time per day), learning new things, writing blogs, articles. Lastly, some are willing to spend their time contributing to Open Source software, which is uncommon in Vietnam compared to the west.

As for the most challenging part of IT work, it still depends on your role. If your job is to write code, then writing good code is the most challenging thing. If your job revolves around interacting with clients, customers, then making them (and also your teammate) happy is the challenge. If you have a bigger role, then reviewing code, dealing with investors would be the challenge.

IT in the real world has a lot of different aspects, works, jobs and roles and all of which are important that it's difficult to address something like the work that "best captures the essence of the IT industry?". The interviewee did give our group one of his achievements, which is the fact that he got requested and contributed to an Open Source on Github.

IT Technologies

In this section, each member will choose a specific area in the IT industry and report about it. The four areas that we choose are: Autonomous Vehicles (AV) written by Trung, Cybersecurity written by Anh, Robots written by Dat, and Cloud, services and servers by Minh. In each report, the content will mainly answer three questions: What does it do, What is the likely impact and How will this affect you.

Trung - Autonomous Vehicles

1. What does it do?

Autonomous vehicles (AV), as the name suggested, are self-driving cars. Simply put, these cars can run on the road without any driver behind their wheels. This technology seems impossible to carry out when it was first introduced in the early 20th century. In 1977, the first AV was created and tested successfully given a specific environment. Obviously, it’s nowhere near the practical state, however, that proved the possibility of AV. Fast-forward to present days, what is the current state of AV?
To answer this question, we need to look clearer into many aspects of AV. Up until now, there are many companies that invested or contributed to AV. However, there are only a few big ones that really matter. Some of the famous names are Tesla, Google, Waymo, these names can be counted by hands, which means there aren’t that many, but also mean that this technology has enough attention. Since the start of the 2000s, these companies were constantly giving out results regarding the development of AV. And in the last 5 years, AV was gradually being used on the real road. At the beginning of 2020, Waymo, an American autonomous driving technology company, began to do a model of autonomous taxis in California. The model was a success, over 6000 of customer services were conducted in the first month and several thousand for each month later up till now. Waymo proved that AV can be used in practical business.

So, did it ever fail? Yes, and a lot. In 2016, Google began many trials regarding AV on the real road, and multiple crashes occurred. However, most of the faults are on the other parties. The real problem happened on 18 March 2018, Elaine Herzberg became the first pedestrian who was killed by an AV. When we take a look at the situation, he was clearly at fault for walking outside of a crosswalk. However, many experts raise a good point:" A human driver could have avoided such an accident". This raises many questions and concerns over the safety of AV. The local government suspended the company's right of conducting test and experiments related to AV in the area. A notable point is that all the experiments and trials were done by the main or side roads. It's pretty obvious that a "natural" route with things like branches, rocks, holes is not really advised to use AV.

Another question regarding the current state of AV: "How often do you see an AV on the road?". This question is surely getting a lot of different answers. In the west, chances are, you wouldn't see them on a street outside of test area or similar places to California in the previous example, but, you probably saw them once or twice in your life. In Asian, however, most people will probably never see them or even know such a thing exists. This is because the price of AV are very expensive, and most the company related to AV are also stationed in the west. The Asia governments are also really strict about the law regard testing and such, they won't accept AV on the road unless they are complete and proven to be safe. The same happens to other High-Tech such as VR (Virtual Reality) but to a lesser extent. So just by looking at the popularity, we can see that the day where people can casually "see" AV on the street is quite far, but it's coming.

So what can we do to improve or speed up the process? For starter, get the safety as high as possible. When people think about AV, the first thing comes to mind is "Is this thing really safe?". The majority of voices which opposed AV are also for this reason. Let's look at all the accidents in the past, especially the one that involved in a death that was mentioned above. What do they tell us? That AV is impossible and not safe and shouldn't be a thing? Maybe, but we can think of it in a positive way. Accidents happen because the technology isn't good enough, maybe the sensor isn't fast enough, maybe the wheel, the brake doesn't do what it's intended to do, there is always a thing to improve. The next thing would be about the price if anyone even considers releasing this technique/product in Asia, where a lot of countries are still the third world, then they really need to lower the cost. In July 2020, according to Google, the shared price of an AV ride cost 0.2-0.4 $. This price is already high in countries like America, we can imagine how it is in Asia or Vietnam.

So, how? What kind of technology surrounds AV that we can continue to develop? For this driverless car to work, the most important thing is the sensor system. This is how this system works. A suite on the vehicle will collect raw data from the environment surrounding it (like what in front, what on the right/left, what behind) and then software algorithms will use that data to calculate many things. It could be the best next action, the correct vehicle needs to make to avoid crashing. In a sense, we can say that "humans make mistakes, machines don't". And of course, aside from that system, there are a lot of other things to compensate for the "driverless" part. AV needs a navigation system, a location system, an electronic map. Each system like that is made by one or more of other technologies. We can name a few: Hybrid Navigation, Homogenization, and decoupling, Vehicle communication systems, Digital traces, Modularity, etc. For

each day go by, these technologies will continue to be funded and developed by big companies. The future of AV will definitely come.

2. What is the likely impact?

As stated above, Autonomous vehicles (AV) have already been made, but there are far too many places to keep improving until we can say that it's "stable". For now, accidents still happen here, and there, the price is still too high for people with average income, especially in Asia. But when it's complete, it brings an impact to a whole lot of industries and will in turn change the way they are.

As always, when thinking about AV, people think about safety. Although this time is in a positive way. One of the biggest reasons for the creation of AV is that it reduces traffic accidents because if done right, machines are way more reliable than humans in terms of safe travel. This effectively reduces the fatalities of humans, which in turn help saving an enormous amount of money for the world to put in other useful places. And when traffic accidents drop, the Insurance industry will be heavily affected. However, that doesn't mean they will be dropping. Maybe, but not if they know how to take the opportunity to change their traditional working model. An interesting thought is that if human-caused accidents drop, there will be another thing to focus their attention on all. That's the technical failure of AV, in other words, the insurance of Cars and vehicles instead of human life. Companies such as Google, Volvo have already put insurance on their products.

The second biggest impact would be about the service industries. When people aren't driving anymore, they will have free time, a lot of free time. And when that happens, they can be working, playing the game, reading books, seeing movies, video chatting and all other things while waiting for AV to handle the driving. Thus the use of these services will skyrocket which creates opportunities for any industry or company to give out a product that can satisfy the need.

Another big impact would be about any industries that revolve around the use of transporting. For example, the mining and farming industry would require a lot of manpower plus vehicles to carry out. With AV, this would pretty much halve the requirement and thus resulting in a big boost in terms of both effectiveness and economics. Another already working in the trial is an autonomous taxi, as you can guess from the name, this is a whole system of driverless taxis.

Although it does have a negative effect on certain jobs. The most obvious ones are the taxi drivers, personal drivers, transporters, etc. All the jobs that require humans to drive will become redundant.

And then it also affects, well, everyone. In the west, it's not strange for an average worker to drive for 3-4 hours per day. And when driving, if you don't want to get into an accident, you would concentrate on driving, and thus wasting that amount of time per day. Now with AV, imagine all the things you can be with that free time you get (you still need to be in the car though).

When you think about it, AV more or less affects every industry in the world since driving is a part of our daily activity. I would say it's an industrial revolution, and anyone who can take advantage of it will receive a lot of rewards.

3. How will this affect you?

For the time being, I haven't begun driving yet so it doesn't really affect me. However, eventually, I will drive, and by then I will find AV extremely helpful.
However, there are many things to consider based on many things. First, I live in Viet Nam, and I can't foresee a near future where AV will exist in Viet Nam. As mentioned in part one, the government in Asian countries, and VietNam in particular, won't allow things that seem hard to "believe" like driverless cars roaming on the street. Another thing that contributes to this is that most countries in Asia, including Viet Nam, are still developing countries. We don't have many resources to integrate a whole autonomous system like this.
I do have friends and family in foreign countries though, and I'm sure in one or two decades, they will get to use AV daily like a prediction. My brother complained that he has to drive 2 hours from home to work and then 2 hours from work to home every day and it makes him very tired. With AV, he will definitely have nothing to complain about, because he can use that time to do lots of things he wants.
And convenient is just what we see right in front of our eyes, what we don't see is the protection AV brings to us. According to many reports, the rate of car crash per year is shockingly high, many of which result in death. If AV is done right, these things will lower to point that they can straight up disappear. And when that happens, I'm that happy for my friends, my family and myself that we don't have to worry about safety when driving.

Anh - Cybersecurity

1. What does it do?

Technology is crucial to any organization and people. Every personal computer security tool is required to defend the user's information and privacy from cyber attacks. A cybersecurity attack may end up with every piece of information from the victim of an identity thief, like exposing banking details, sensitive and private information. Users should always understand and take in the basic knowledge of security principles like selecting sturdy passwords, being cautious of attachments in emails, and backing up important files. Common technology that defends these elements are firewalls, DNS filtering, malware protection, antivirus code, and email security solutions.
A good cybersecurity practice is to have multiple layers of protection unfold across the computers, networks, programs, or sensitive information. In a company, the people, processes, and technology needed to be complemented by each other to make an efficient defense from cyber attacks. According to cisco, a cybersecurity service, users can also benefit from the work of cyber threat researchers, similar to the team of 250 threat researchers at Talos, who investigate new threats and cyber-attack methods and neutralize it (Cisco 2011).
In the approaching 4 years or so, nation sponsored organizations will be able to develop cyber-attack technologies for defense and offense; the financially driven criminal organization will continue to obtain ways to get more money as much as possible through cyber-attacks; hacktivists will continue to use cyber to convey their messages;

terrorist groups also will shift to cyberspace; and eventually – individuals with no apparent motive, who want to demonstrate their technical skills, sooner or later can eventually continue “contributing” to the attacker's system. In some countries and states can have an even bigger role in protecting massive scale of the environments like their own infrastructure (power grids, facilities – everything around us), and perhaps even to supply a number of their intelligence to the general public. For example, our network entree can share data with our personal devices so better cybersecurity is a must-have. Since the birth of the internet, everyone can communicate with each other very easily so that nearly all of our personal information and logs reside in the cloud or a system of some kind, when we are not in total control, the dataflow and access to data can be leaked outside for some malicious activities. Some individuals would argue that so as to shield our systems, we will have to grasp the hackers’ motive. Several cyber-attacks are run primarily by “bots” that scan the whole network and analyze the weakest spot to prioritize the attack tactics, so when we don’t see any malicious program or activity on your system, it doesn’t mean that it is entirely safe. Due to that fact, cybersecurity defense systems must be more sophisticated and refined so as to handle large amounts of information from the database.
So overall, we are going to see systems that are smarter, more refined, ready to handle large populations and huge amounts of information, systems that can perform efficient and rapid self-update, that could take in the most efficient and safest solution in real-time which can be hooked up with shared-intelligence centers that are keeping giant countries like North America and the European Union guarded. Large companies must protect their information on their own servers, their data backups on their own cloud servers, on their personal computers, and even on mobile devices in order to keep everything safe. For that to happen, we need to interconnect our defense systems to be able to act in real-time. We will need to cultivate a new generation of cyber specialists who are experts in the security field to develop and drive those systems.

2. What is it likely to impact?

Cybersecurity has a very important impact on everyone nowadays, whether you are an individual or a behemoth of a company, or even the government. Lack of cybersecurity pretty much means that you are giving your money, your face, personal information to someone who you never talked to and they could also sell everything about you. Cybersecurity is not something to take lightly, it is vital to have a cybersecurity system due to the fact that it is encompassed with everything that is about the protection of our sensitive information, personal data, governmental and business data from potential attackers. Data breaches can involve banking details like credit cards number, checkout info, sensitive trading information, all of these could potentially lead you or a company to a massive financial loss.
Especially when you are a corporation, you can ruin your reputation by not having a good practice of cybersecurity. Leading to losing trust from both the customer and other parties, also having to suffer the loss of future clients to other competitors and extremely poor media coverage. Data breaches will result in massive lawsuits revolving around the client's data got exposed, leading your company to regulatory fines or sanction as a result of cybercrime.

Because of this, all business, no matter how big or small, must have a good practice of cybersecurity like ensuring employee's understanding of cyber threats and how to tackle them, have a proper security team to prevent attackers from the system and a good firewall or a false gate so as to lead the potential attack to the wrong place where you only store something like miscellaneous files, do regular check up on your database to seek out some potential threats. As for the individuals you should always use a tough password, change your password regularly, do not use the same password over and over, and especially never link your important email to any site.

3. How will this affect you?

To me personally, I have a pretty ok knowledge of how I should protect my personal information. Meaning that at this current state, cybersecurity would not do much good for me since I have already properly used a good basic of cybersecurity practice. However, when more advanced security tactics are implemented I expected to be able to feel less paranoid about people looking into what I am doing and using my information for their bad doings. Also with a rapidly updating security system also meant that I can do less research when I wanted to click on some sort of site, hopefully, that system could prevent something like constant click jack that may or may not plant a malicious program into your machine and constantly collecting data, information of you and people who use your machine and they also could potentially spread through your network system and infect other machines.
Most of my family and friends don't know much about computers and threats in the world wide web, sometimes they could lead themselves into a dead-end where a lot of their information like login details exposed and leading hackers into their machine frame. It is very difficult to make everyone who doesn't really care about the techy world to be bothered with complete security, hopefully in 4 years or so cybersecurity became so advance that you don't exactly need a good knowledge of how they work to prevent something and everything can do automatically for you which is very handy for people like my friends and family.

Dat - Robots

1. What does it do?

The word “Robota” was first appeared in Rossum’s Universal Robots by Czech author Karel Capek in 1922. At that time, the word Robota means workers. From that, we have a very first definition for Robots, a machine that replaces workers in the manufacturing industry. Since then, it has been developed rapidly and Robots now can be autonomous or semi-autonomous, which means that it can interact with people, execute their own decisions based on sensor information, being independent of humans’ interventions for the autonomous robots and capable of adapting to the environment. Moreover, with the application of Artificial Intelligent, Robots now have some characteristics of human intelligence to some extent and have a unique memory capacity as an independent individual. We named this invention “Artificial Intelligent Robots”.
Regarding normal Robots, the most common types of Robots are Professional Service Robots and Industrial Robots. For Professional Service Robots, we have Agriculture

Robots, Construction Robots, Customer Service Robots, Defense Robots, Demolition Robots. Exoskeleton Robots, Field Robots, Humanoid Robots, Industrial Cleaning Robots, Inspection Robots, Logistics Robots, and Medical Robots. Next, we can be familiar with some types of Professional Service Robots since we are familiar with their applications in our daily life such as Automatic Vacuum Cleaner, Smart Lawn Mower, and Automatic Trash Can. However, there are some types of Professional Service Robots that most of us have not had a chance (or do not see it so often) to see it yet, like the da Vinci Surgery System, the Human Universal Load Carrier (HULC) exoskeletons using for military purpose, or the Advertising/Guiding Robots in Mall. With regard to Industrial Robots, we have Cartesian Robots, Gantry Robots, SCARA Robots, Articulated arm Robots, and Human-assist Robots. The most common functions of these robots are Packaging, Welding, Painting, Cutting, and Assembly Components. Referring to Artificial Intelligent Robot, we now have an Artificial Intelligent Robot - Sophia, created by Hanson Robotics. She can walk, give unique responses in many different situations, and has a sense of humor. She has humans' emotions and she can express her feelings through facial gestures, which is unprecedented. She has the ability to recognize people's faces and various complex hand gestures. She is also the first Artificial Intelligent Robot to be granted legal citizenship in Saudi Arabia. Another example is Erica - the first Artificial Intelligent Robot who will play a lead role in a Hollywood Sci-Fi movie. In the future, we can make further progress on "Artificial Intelligence Singularity" in the field of Artificial Intelligent forums. This indicates machines will be expected to be able to build better machines by themselves. This means they do not need the intervention of humans on neither systematic upgrading nor building. As being independent of humans, when this happens, one thing that can be assured is that Autonomous Super Artificial Intelligence becomes outstanding, compared to the finite cognitive capacity of human beings. To make this feasible, with the aspiration of leading a better life, humans will build a world where they and Robots can collaborate to achieve ultimate productivity and efficiency at work. Furthermore, as computer scientists need funds to carry out further research on AI and Robotics, therefore significant contributions coming from business and private investment as a result of positive economic development - will accelerate this process. Notably, in order to reach a milestone in Artificial Intelligence development, breakthroughs in Computer Science like optimizing Machine Learning and Deep Learning are required to be made.

2. What is the likely impact?

The potential impact of developing AI alongside Robots can affect a variety of areas including Labour Market, Organization of Work, Working Time, Remuneration. When applying this development, significant changes will be noticeable like re-structuring the operational system, reforming organizational working cultures, and altering work practices/workflow. All of those shifts result in the betterment of workflow including optimal productivity, flexibility, and efficiency. For example, in the event of the COVID-19 pandemic outbreak, employees have to work from home which can decrease the work quality due to greater distraction from the surroundings. However, supposing we use Robots at work - which are insusceptible to viruses, the workload will decrease substantially as robots under our control will be in charge of complex tasks

autonomously acting as a replacement of workers. Should this idea be implemented, we can protect ourselves while organizations still operate as normal. Therefore, applying robotics technology brings about profound changes in the entire operating system of all businesses enabling them to thrive albeit hardships. However, once the technology is applied, staff-training-like learning how to operate robots is compulsory to ascertain that workflow goes smoothly. Robots can also replace humans to go to dangerous environments to explore and collect data. Nevertheless, this is likely to create a new job market for managing Robots with new job categories like Data scientists. This comes along with the elimination or redundancy of certain types of ordinary physical/manual jobs.
However, when you have a robot that can do something for you, you tend to develop an inclination of relying on it which gradually slows down your flexibility in completing simple tasks. For example, in the Cartoon Movie called 'Wall-E' of Disney, they depict one of the possible scenarios in which Robots are independent 'hosts'; and we depend so much on them to the point we become immobile and unable to take care of our own newborns. Another point worth considering is that supposing all of the Super Artificial Intelligent Robots can be granted to be a legal citizen, would it be possible to let a human marry a Robot? If the answer is Yes, then that would have a huge impact on re-constructing how our world operates.

3. How will this affect you?

In my daily life, it assists me so that I can save time doing other work. Thus, it can help me work more effectively and I become more progressive at work than I was previously. When multi-tasking is required, with the aid of its application, I can solely focus on particular problems one by one, the remaining tasks can be done or supported by Robots. Were Robotics and Artificial Intelligent to flourish at a rapid rate, I could have a Super Artificial Intelligent Robot being as competent as me, then, how fascinating this reality would be when this robot was the duplicate version of me. As a result, the speed of completing work is literally two times faster. However, that is just a view from the working aspect. When it comes to the aspect of the social relationship, there is really a big question about how Robots will affect our human relationship. Whether Robots will help us to connect and bring us more closer or it will keep us being isolated to others? The answer to this question really depends on how users perceived Robots. To my friends and family, providing that they can utilize the use of Robots, there will be more quality time to spend with other family members or their important people in personal life, thus the connection between people will eventually become stronger. On the other hand, they will spend more time with Robots and cut down the time to spend with their loved ones.

Minh - Cloud, services and server

1. What does it do?

Normally, when people talk about cloud, services, and servers, they are talking about cloud computing services in general. Servers are pieces of computer hardware or

software that provides functionality for other programs. With the appearance of cloud servers, we can categorize servers into 2 types: local and cloud-based [1].

Local servers required the users to implement their own hardware and software to start using the system. They also need maintenance and constant checkup in order to function properly throughout the usage. Cloud computing serves as a solution to this problem. Cloud computing and related services are essentially the packages of computing services - including servers, storage, databases, networking, software, analytics, and data interpretation- being provided over the internet (the cloud). [2]

The most notable characteristic of cloud computing is that it relies on the sharing of resources and in return, minimizes up-front IT infrastructure costs. Cloud providers typically use a “pay-as-you-go” model.

Main types of Cloud services: [3]
- Infrastructure as a Service (IaaS): refers to online services that provide high-level APIs used to abstract various low-level details of underlying network infrastructure like physical computing resources, location, data partitioning, scaling, security, backup, etc.
- Platform as a service (Paas): Similar to IaaS but with a higher degree of automation with the ability to deploy products onto the cloud without the need of controlling the underlying cloud infrastructure including network, servers, operating systems, or storage.
- Software as a service (Saas): The consumer is now capable of using the provider’s applications running on a cloud infrastructure.
Serverless computing: A cloud computing code execution model in which the cloud provider fully manages starting and stopping virtual machines as necessary.
- Function as a Service (Faas): users can deploy individual functions in the cloud that can be triggered to run in response to particular events. FaaS is included under the broader term serverless computing but can be used interchangeably.
- Mobile “backend” as a service (MBaaS): Web app and mobile app developers are provided with tools to link their applications to cloud storage and services with application programming interfaces (APIs) and software development kit (SDKs)

Cloud computing applications are numerous and ubiquitous. If you use an online service to send emails, edit documents (google docs), watch movies (Netflix) or TV, listen to music, play games, store pictures, it is likely that you are experiencing the applications of cloud computing. Customers of cloud services now can create cloud-native applications, test and build applications with flexibility, store, backup and recover, analyze data, use embed intelligence (machine learning models which are resource-hungry).

The future goal of cloud computing mainly is to increase reliability and reduce cost. Some rising trends can be seen in the next few years such as hybrid cloud which improves cost efficiency, scalability, agility, and security. Edge computing (distributed computing paradigm that brings computation and data storage closer to the needed location) and hyper-scale data centers also increasing in popularity, the reason for this

is that data storage cost is dropping over the years as technologies related to storage have advanced significantly. We can also see that Disaster-recovery-as-a service will peak in the following years as the cost of a data breach can be devastating to big businesses, this development is also supported by the ever-growing need of data security and improvements of cybersecurity. Finally, as AI makes its way through the technology world as one of the fasted advancing aspects of this decade, the use of AI in the data centers to save functioning energy and detect patterns in hardware failures will also increase significantly. [4]

2. What is the likely impact?

The impact of cloud computing will be different for various individuals. We can see that businesses are the ones affected the most by the development of cloud computing. Cloud services have been the optimal solution for early development as for its affordable cost, flexibility in scale, and increase in productivity of developers.
Nowadays, the impact of cloud computing is completely beneficial and can bring to the business these specific advantages: [2]

- Cost: Cloud computing eliminates the cost of buying hardware and software needed for database management.
- Speed: Vast amounts of computing resources can be provided by the supplier with just a few mouse clicks (operations). This give businesses burst computing capability (high computing power at a certain periods of peak demand) [3]
- Global scale: computing resources can be delivered from the right geographic location (data being near the place of usage)
- Productivity: IT teams are relieved of the tedious data-management tasks and can spend time on achieving more important business goals
- Performance: The biggest cloud computing services run on a worldwide network of secure datacenters, which are regularly upgraded to the latest version of fast and efficient computing hardware.
- Reliability: Cloud services makes data backup, disaster recovery and business continuity easier and less expensive as data is mirrored at multiple redundant sites on the cloud network.
- Security: Cloud services also provide advance security technologies that are usually neglected during initial stages of business.

As the impacts of these advantages have on the competition between businesses are undeniable, the common path for new businesses has long included cloud computing in their business plan. Businesses are required to implement their systems on the cloud if they want to compete with their competitors. Cloud-based systems will give the potential business the tools to create a more robust solution to new and existing problems

As for developers, the skills to understand and use cloud services effectively have been critical to their skillsets. Knowledge about cloud services and servers has never been so valuable. This also means that developers are now compulsory to hone the skills necessary for cloud-related technologies if they want to increase the chances of landing a job. New positions related to cloud technology will appear and replace some of the old positions such as the server managers, security specialists, etc which were required

when local servers were prevalent. Most businesses then will only need a small team of developers that understand cloud services to run properly.

As for the common internet users, they can expect to see more and more businesses and services that use cloud-based technologies. Although the consumers are usually unaware of the implementation of cloud services, they will undoubtedly be benefitted as common services such as music listening and video streaming will become more approachable, faster, and cheaper as the underline functioning cost is being continuously reduced. New services will also appear as people start to realize the potential of cloud computing. On the other hand, technologies about creating and maintaining a local server will not be made redundant as the data centers

3. How will this affect you?

My daily life as a normal user will be the same with the addition of new services. I will have access to a much more diverse category of suppliers when I need to finish a task. Services such as music streaming, video streaming, social media, comic reading sites, messaging, etc from all around the world will have the ability to reach audiences from all around the world, thus creating a larger market and increase competition, which is beneficial for both the customers and the economy as a whole. As an example, services such as Youtube, Google, Facebook, and Spotify, all of which are a part of my daily life, are blazingly fast in Vietnam despite having no physical servers placed here. In addition, I can also get access to new services such as Qobuz (music streaming and purchasing), this was impossible in the past due to the slow internet connection.
As a potential developer, I now must devote time and effort to study and achieve adequate skills in cloud computing and how to masterfully manipulate the functions provided by cloud services if I do not want to be outdated about the technology world or left behind in the competitive job market. Cloud-based technologies are also a tool for me to create my solutions and actively join the business world when I wish.
My friends and family will also be introduced to more and more services which eventually will open to them more options when choosing which service to use. My friends, some of which are having the intention of creating startups, will be greatly benefitted by the development of cloud computing as the initial cost of bringing the startup to life is significantly reduced. In summary, both the businesses and the customers will be profited by the cloud services trend.

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Project Ideas

In this section, there are two parts. The first one will be the Description of our projects where we included the features of our projects as well as how our project can stand out in the current market. The second one will explain why we want to do this project, also known as Motivation

Description

After discussing as a group, we decided that our group project will be to create a website to search for leftovers or remaining ingredients after cooking recipes to alleviate the food-waste problem. Moreover, we also decided to add another feature which is to calculate the protein per gram based on the type of ingredients and suggest the diet for different types of people following the types of their training program. For the first feature, there will be a search bar for users to enter all the names of ingredients that they have, and then they will be suggested to a list of recipes. The protein calculator will be inside at the end of each recipe to show them how many proteins per gram each ingredient they will consume.

The thing that sets our project apart from those available cooking apps in the market is our original vision to create something that can alleviate the food-waste problem in the world. Our app is more focused on how to cook with leftovers or a small number of left-ingredients. Since those cooking apps in the market right now just show to users the recipes to cook a normal dish with a full list of fresh ingredients. However, what if there are leftovers but they do not know how to combine to still make delicious food and throw them away instead? That definitely makes the food-waste problem become worse, and it comes along with many problems such as environmental problems. Furthermore, we also add more features to make more strength to compete with those existing apps:

- Search to check is it safe to combine/eat anything together, and I name it “Check Poison”: There will be a search bar for users to enter the name of the ingredients. This is the feature to check that it is safe to combine something when you try to explore more about cooking. For example, people should not eat durian and drink alcohol at the same time because it will lead to some chemical reactions inside their body, and they will eventually suffer from symptoms such as headache, vomiting, heart palpitations, nausea, facial flushing, and low blood pressure. In the worst scenario, this phenomenon can be fatal.
- Provide news or articles about health concerns: The app will provide some articles/news about foods and health concerns so that users can explore more about healthy lifestyles and eat healthily at the same time.
- There will be a forum section served as a personal blog or a place to share the experience cornering foods and health:
    - Users can share their recipes or diet programs with everyone to try and have a novel experience. Nevertheless, before updating the recipe, it has to be verified by the professional team of the app to ensure there is nothing wrong for everyone to follow those. Besides, people can also

review or post their comments to have a variety of overview aspects of those recipes.

- Users can also share places like local markets to find a good deal and suggest what they should buy following the season. They can also contribute something like tips to preserve used food better. The research team can also go and verify some of the places, and give those place ratings based on true experience.
- Sell ugly food products such as potatoes that are not round, pretty enough. Although their appearances are not good enough to be packaged and sold at the supermarket, their qualities are comparable to the normal ones. We will develop a logistic solution and distribute these products to potential customers like restaurants or people with tight living budgets. This requires knowledge and experiences in logistic technologies and also the business skills needed.

Motivation

There are 1.3 billion tons of fresh, delicious food/ingredients wasted every year, which costs $1 trillion annually (TheWorldCounts 2020). And there is an interesting fact that in most developed countries, over half of the food waste occurs in the home (Olio 2020). Another interesting fact is that reducing food waste can alleviate environmental issues such as climate change (R.Smith 2015, National Geographic). Therefore, this app will not only help users to have more economical and healthy meals but also ease the problem of wasting food that the world is facing. Furthermore, one more problem that people usually do not know the exact ratio or the exact of how many proteins/carbs/fats that their's body needs to stay healthy, thus leading to the over-eating problems. People are usually getting food poisoning because of the lack of knowledge about the ingredients that they eat, therefore we also want to solve this problem.

Feedback

In this section, each member will give feedback to everyone in the group, including themselves. This section was for each member to different views from others to re-evaluate themselves and they could also learn what can be done to be more productive and work better with the team.

Trung

Trung (Myself): I believe that I'm a good member but with weakness. I did a lot of works in this project (I did most of the HTML part, others did contribute to it though). I also actively engage in conversations with other team members. However, I did have my

weakness and fault during this assignment time. That is I didn't do much at the beginning (i had my reasons but laziness is part of them). This negatively affected the group's workflow as well as everyone's morale.

Dat: He's a good member, same as me, he has a desire to have a good mark (which I believe is the base for any motivation) and did his work. He's always actively finding places that can be improved, thus requesting others or fix it himself. During the meeting, he’s also contributed a lot to the conversation. Although the same as me, he's another member who started late (not that late though, we still have plenty of time) to do the assignment.

Minh: He's also a good member. During the first half of the weeks, while we didn't do much, he's the one who started up the project (setting up Git stuff, planning out work, etc). Later on, he also finished his individual first and will fix it if given feedback. He also did contribute to the conversation, but sometimes I can't seem to understand what he thinks, whether he's annoyed (with the group workflow/result) or not.

Anh: he's definitely a good member, however, I think he needs to improve his teamwork. He did his work well and on time (he actually started before me). He's also easy to talk to and willing to hear what I or other members said. But outside of his individual work, if no one assigns him to do anything, then he will remain inactive. The same happens whenever we have a group's conversation.

Anh

Trung: He is an amazing team member, he is willing to help the whole group on designing and making the site. He did a lot of work for the whole team, engaging in conversations and helping the team out on their problems. I really do admire him for what he could do and his responsibilities. However, the problem is he is often being the last one who is either finalizing the work and it is fairly hard for me to figure out what his plan is and what he is aiming to achieve.

Anh (myself): I think I'm not a very good team member because I found it very difficult to jump in with the conversation or keeping a conversation going without freaking out. I usually listen closely to what my team is up to and do what I think is good and not ruin the team's workflow. However, I usually held back on pushing my work onto GitHub although I had them prepared just because I feared that due to my lack of experience, I might ruin someone else's work. Which results in only submitting when I know for sure it is safe to do so. And I usually held back on giving my own opinion due to my personality which is pretty bad for the overall workflow of the team.

Dat: I think that Dat is a great team member to have, he really thrives to get great marks and does his work really efficiently. Dat participates a lot in the group's ideas and conversations, often checks on other team members on their work and gave feedback on it. He came up with a bunch of interesting ideas that help the group with the content and how we should approach different things. His weakness I think is that he tries to

multitask and work a lot of different things at once. This may result in some distraction or he lost track of what was his initial goal but this is very manageable since he usually knows what mistake he had made.

Minh: I think he is a really great team member, he started working on the framework and the outline of the workflow initially, he did all of his work very early and made everything super clear for everyone to follow. During the whole team conversation, I can't feel what is going on in his mind whether he is satisfied with the workflow and the result or not since he doesn't clearly show what are his thoughts on the project.

Dat

Trung: Trung is a good team member. He is the one that understands himself clearly, which means he has his own pace of work and knows which part should be dealt with following the task priority. He is very engaging in a group conversation and he is the one that usually volunteers to some tasks. However, he should communicate more about the style of working at the beginning so that every member can understand the reason behind his action. In the end, now we had understood him and the atmosphere in the team, thanks to him, is becoming much better.

Anh: Quang Anh is a good team member. In the beginning, he had prepared all of his work to ensure that he will able to finish all the works on time. This shows that he has a responsibility to complete all of the tasks. However, he is a taciturn person and he rarely comes up with the new ideas or discusses the others' ideas in the group. I hope that he can be more open and share with us his thoughts in the future

Dat (myself): I consider myself to be a normal-good member. I am only one in the group that has no experience working as a group with other IT students because this is my very first semester at the university, while all of my teammates are already had the experience to deal with it. Therefore, things were a bit a mess at the beginning where I did not contribute so much to the group work. However, things changed when I realized the problem and keep things back in track as soon as possible. I tried as best as I can to finish my individual tasks. After that, I went thoroughly through my teammates' works to figure out is there anything that can improve the quality of their works and gave them detailed and constructive comments to make our group work turn out to be the best product within our ability.

Minh: Minh is a great team member. He is the most experienced one in the team and therefore he is like a big brother in the team. He is the one who helped us to make a detailed plan and workflow in the second week so that we can work more effectively. I would say he is a well-prepared person when I saw him started all of his work very soon. However, the weakness of him is the lack of enthusiasm to try to bring every people in the group works as a whole and his communication skills. At the moment, the situation is improved and I can see that he is trying to make more effective conversations with the group and put more enthusiasm in the group works.

Minh

Minh (myself): I consider myself to be a normal team member, with some prior experiences of the team working. My strong point is that I take responsibility for team working and I had worked in a few different teams to know the correct way a team should function. I tried to set a work path (planning) for the team so as to avoid conflicts and problems in case no one really knew exactly what to do. I also did my individual parts early to avoid missing deadlines. However, my big weakness is the lack of enthusiasm and passion in the work in general. I do not feel inspired or motivated. I also lost my attention to the assignment when there were personal businesses involved. This is dangerous to the workflow of the group.

Dat: Dat is a great team member, but he was a bit unresponsive in the initial group interactions. His strong points are his responsibility and thirst for a refined assignment. He would check other member's part and give detailed feedbacks which are very helpful. He is also very attentive to the group's conversations, he would share his opinions with appropriate considerations to others. His weakness was that he would lose his focus in the assignment and be unresponsive to the group's activities. He initially would be unresponsive in conversations (messages) and I had a hard time figuring out his thoughts. This problem, however, was resolved when he finished his assignment and realized it himself his faults.

Trung: Trung is a great team member, but sometimes I do not understand him. His strong points are similar to Dat's, which are responsibilities and a desire for a good assignment. He is responsive in conversations and contributes many things to the assignment. His weakness is that sometimes he would not respond to the conversation or just forget about the information discussed before.

Anh: Anh is a good team member, but he has the typical characteristic of an IT student in teamwork. He finished his parts on time and early, even earlier than Trung and Dat. This means that he cared and took pride in his work. He is also relaxed in a conversation, which is suitable for long-term teamwork. His weakness is that he does not respond much to the conversations. He would simply see the other members interact and follow the plan. Sometimes I do not know whether he likes the idea proposed or not. But this is manageable within a team.

Group Reflection

In this section, each member will give their personal views about the performance of the group from the beginning to the end. Through this section, we have a chance to see our group problems to not learn more about teamwork skills and try not to make the same mistakes again.

Trung

During many weeks of this assignment, I kind of went through a roller coaster. In the beginning, I had a good feeling that this team would be great. However, later on, the result kind of let me down, people didn't interact much, most of the team just did their own personal thing, this including me. Initially, I didn't think this is my responsibility, because I use to work very fast and efficiently in a few days so I rarely start soon. But later on, I learned that I myself contributed to this negative atmosphere of the group. In week 8, we had the first meeting, and the result surprises me, it was successful. After that the situation became much better, everyone added their contribution to the group. The assignment was finished at the right time, and with a good result, I believe. With that say, I believe that we can do much better. People who start late (like me) should start soon, people who don't talk much should talk more and if we have ideas that we want to share, we should do it. I also learned a lot about teamwork, about different individual's genitive. Each one may have their weak points, but they also have strong points, knowing how to work with anyone efficiently is a great challenge that I gladly accept.

Anh

When we initially started forming a group, I think our group was going to be very thoughtful and carefully plan out like most of the groups on other projects that I have been to in the past. However, after the first three days or so it just became a roller coaster of emotions, it started out really great and then remained surprisingly quiet even after a new group member joined in. Two weeks have passed, there still no communication between group members which is very worrisome, no one talks about anything or building up any structure for the assignment, a team member notifies that a google doc file was made for everyone to put in their individual work. Week 8 rolled over, all of the team members agreed to meet up and start working on group work. And to my surprise, everyone is super active and really open which is very odd for them to be so quiet at first. Everything went really smoothly during our session, we got everything done and settled up with the framework for the whole assignment really quickly using google doc and GitHub functions. After the meeting everyone started to become really active, their frequency of progress summation is extremely high, pretty much everyone reported almost everything about what they were doing, what were the troubles, etc. With this team, I think we achieve a great result. However, one thing that should really be improved is the whole group's initial communication since it could set the mood for everyone to start focusing on the work and help them thrive for better results. With that said, everyone has done a superb job on the workflow and communicating with each other. Because of this team, I've learned that not every person, every group, in this case, has the same style of laying out, preplanning first and then start working. Every person, every team has their own strengths and week points, all we have got to do is trust each other on their own capability.

Dat

In my point of view, the things that went well in our group that is everyone has a high sense of responsibility and the overall skills of all members are good. Furthermore,

everyone is so friendly and supportive when there is a problem. If I do not sure about something, I know that I just need to ask and they are more than willing to show me the way. In the end, we are able to understand the problem that our group had, and everyone is striving to solve that problem. The thing that needs to improve is our communication and task-and-role dividing skills. Communication is key to bring every member to work together and we have to have a specific role for each member and have a detailed plan to follow up with our tasks being divided well for everyone. Our team also needs to figure a way to improve the team atmosphere to be more interesting and safe such as a no-judging environment to let every member is more engaging and to be more creative when solving a problem. The first thing that surprised me the most is that our work progress after the first meeting was incredible. The atmosphere of the group was improved and everyone was more engaged in the group work. The second thing is that every member is friendly to receive comments and discuss it thoroughly to improve the quality of the group work. From this experience, I learned that everyone should actively try to understand others and find the most suitable way to work with the group. Furthermore, I also learned that people are just imperfect, everyone has their strengths and weaknesses. However, we should help each other to improve our weaknesses step by step and also continue to develop our strengths to a new level. Finally, I believe that everyone should try their best to step out of their comfort zone, be more open, and believe in others.

Minh

I personally think that the assignment went particularly well as the actual report was carefully written and examined by the team members. None of us slacked off or behaved negatively during the teamwork and deadlines. Initially, we have some problems with communication but it has been fixed relatively soon. Everyone contributed in some parts of the assignment. My only wish for improvement is that the team members can have more concrete planning as, during the first week, we did not do much because of the lack of planning. One thing that surprised me the most was that before our first meeting, team members were being unresponsive and did not use GitHub at all. After the meeting, however, all of the team members have been participating more in communications and workflow, especially the use of Github increased drastically. I have learned about group work is that sometimes you have to believe in your teammates and rely on them on crucial parts.

Group

As a group, the things that went well for us is that each member has an ability to adapt to a different kind of situations, an ability to perceive a problem and an ability to fix it as a group. All members have a high sense of responsibility for their works and more than willing to support others at anything to improve the effectiveness of the group work. Another thing is that they really know how to listen to others whether it is about the new ideas or comments on their works.

Regarding the things that can be improved is that we should have a detailed plan and small deadlines for each part of the assignment. Furthermore, everyone should always be more proactive in every situation such as deciding and setting group meetings,

having a specific role for each member, and communicating with other teammates to understand their characters, styles of working, and what they really good at and which part they want to be responsible for. Each member should also be more responsive in the group conversation whether online or offline and contribute more about their ideas to discuss with the group. Another thing we can improve is that the report on the progress of each individual to let the whole team know how things are going of each individual. If the progress is slower than the plan, then others can talk and discuss whether any problems or whether that member stuck at some points and offer some helps if possible. Although the atmosphere of the group in the current state is very good, we can improve it to make it more appealing and more inspiring to help everyone in the team feel more excited when working together. We believe we can achieve those things after this assignment to "level up" both our general skills and IT skills, break our limits, work more effectively, and achieve better results in the next assignments.

The surprising thing that all member of the group agrees that the efficiency of everyone in the group after our first meeting. It is like an activity that breaks our barrier and brings us working as a team. Another surprising thing is that all team members are friendly and have an open mindset to welcome all the new ideas and feedback from others in order to elevate the skills and the quality of their works. We believe that is one of the main reasons why we collaborate smoothly together after that meeting.

The most crucial lessons that we all learned from this experience is that humans are imperfect, each person has their own weaknesses and strengths, and we need to have a belief in our team members. When working as a group, we have to understand that and not just sit there and complain about others but we have to try to clearly understand each other through effective communication and assign them to the most suitable works and creating a professional environment.

Commit History on GitHub:

https://github.com/momoclouq/IntroIT_assignment2_group23/commits/master