**IT ASSIGNMENT 2: FOODIES**

**SECTIONS OF THE REPORT**

**Team Profile  - Christian  
Tools - Christian  
Industry Data - Christian  
IT Work - All  
IT Technologies - All  
Project Idea - Patrick  
Feedback - POSTPONED UNTIL FURTHER ANNOUNCEMENT   
Group Reflection - All**

**GROUP WEBSITE LINK https://rmitfoodies.github.io/Foodies/**

**GROUP REPOSITORY LINK https://github.com/rmitfoodies**

**INDIVIDUAL WEBSITES   
https://techwear.github.io/s3781816**[**https://hubbybub.github.io/**](https://hubbybub.github.io/)[**https://patzorzz.github.io/**](https://patzorzz.github.io/)

**TEAM PROFILE**

**PERSONAL INFORMATION**

**Patrick:** My name is Patrick La. My student number is s3508768. My background is Chinese and Cambodian. My IT interests are building computers and also working around switches and routers. I enjoy playing video games as a hobby and social media. I have very little IT experience but I have done work experience when I was in year 10 at Swinburne University in the IT department. By the end of the course, I would want to find a job somewhere around the network engineering field or maybe security.

**Christian:** My name is Christian Phongsavan, my student number is s3781816 and our team’s chosen name is the Foodies, my background is Vietnamese, Lao and Thai. My hobbies consist of playing games, watching movies and exercising. My interests in I.T are video & photo editing, building computers and databases, I have multiple interests in Information Technology, I’m interested in building computers, editing photography and videos and I’m interested in the management of data. In the work I.T work industry I have no experience but I have experience with building computers and editing from hobbies done at home.

**Andrew:**

My name is Andrew Zhang, my student number is s3786306, my background is Chinese however, I was born here in Australia. My hobbies include listening/playing music, sports, gym, eating food, playing video games and spending too much time doing what I’m not supposed to. For me, my IT exists in the world of automation, I was very interested when the first auto drive from Tesla was introduced, it showed me the power of the world of IT and made me pursue it more, I think this not only sparked my interest but has opened my eyes to the capabilities that the world I live in has. For the longest time, I thought that in my lifetime of give or take 80-90, that nothing world changing would happen, however, I think Elon Musk has opened a door for me and I want to be a part of something amazing/new/exciting. We decided to choose the name Foodies since our partner, Patrick, was interested in making an app similar to Zomato and so we compromised and chose to go with his idea.

**TEAM PROFILE**

**Patrick:**

Based on the 16 Personalities test, I am an Adventurer. This means that I am very relaxed and warm, that my “live and let live” attitude naturally makes me likable and popular. I can easily relate to other people's emotions and help establish harmony, good will and minimize conflict. This would be a good trait while participating in group projects because I am the type of person to just go with the flow and provide aid to all the team members when in need. In the 16 Personality Test it also says that Adventurers aren’t well-known for their long term focus but rather their adaptability and spontaneity , and loathe being micromanaged. Based on the VAK learning styles questionnaire the test indicates that I am a Visual learner. As a visual learner I am a very good reader/observer. As i took the Big Five personality test i found out that i scored highest in "Agreeableness". This means that i would put others needs ahead of my own, and to work together rather than compete with others.

**Christian:**According to the 16 personalities test, I am a logistician. This means that I am led by by logic and dedication towards work and that I enjoy taking responsibility in group work and that I feel proud for doing so. For the group it means that I would want to have a structured plan for completing the work which helps group organisation. My responses for the Learning Style Assessment indicates that my preferred learning style is Visual meaning that working in person serves best for me because I’m able to analysis and see what is happening. The Big Five Personality test tells me that   more of an individual that is more shut in but hard working meaning that i’ll complete any needed work for the assignment.

**Andrew:**

Based on my 16 personalities test, I am a campaigner. This loosely describes me as a person who’s outgoing and, as they put it, “a true free spirit”. Describes me as a person who lives less for the excitement of the moment but rather a person who lives for the social and emotional connections. Saying I am “Charming, independent, energetic and compassionate, the 7% of the population that [I belong to] can certainly be felt in any crowd.”. I’m more extroverted, intuitive, more connected to my emotions, more prospecting toward work and am more turbulent in the confidence of myself.

**IDEAL JOBS**

**Patrick:**I have chosen “Senior Network/Senior Engineer as my ideal job. The job is apart of the company Sparx Solutions, I have heard many good reviews about the company. They have a reputation and have been included in the Australian Financial Review’s Fast Starters in 2018, 12th in CRN’s Fast 50 in 2018 and Juniper Network’s Emerging Partner of the Year in 2016. This position is appealing to me because it is a job that I cannot get straight away from graduating, it requires me to apply for other jobs within the field and work up towards this goal. As a Network/Security Engineer you must have strong technical knowledge and capabilities. The skills that are required for this position are having experience in routing and switching within the Cisco environment. This will require me to sign up for Cisco training and certifications in the future. You will also need to understand a lot in the security department. For Example, being able to analyse patterns of security events from firewalls, IDS, IPS, SIEM and other security data sources. The job also requires you to have an extensive knowledge in deploying and securing Microsoft Azure environment. Microsoft Azure is a public cloud computing platform which is used for virtual computing, storage and networking and plenty of other services. The skills, qualifications and experience that I have currently are very barebones. I have a very weak coding knowledge as I have only worked with java. I have very basic knowledge in networking, but I have worked with a virtual machine before and setup roles. Very basic subnetting schemes and implementing IPv4 addressing and some very basic configuring & troubleshooting in ethernet networks via Cisco CLI on Router and Switch platforms.

My plan would be to finish my course in Bachelors of Information of Technology or i would possibly move into Computer Science or maybe even Software Engineering instead of the standard Information Technology course. I would obtain the skills and experience by getting professional industry certifications in security/networking

For Example: CCNP(CISCO), CCIE(CISCO), PCNSE(Palo Alto Networks) - These certifications require you to take an exam.

**Christian:**The position is to work as a Database Administrator for Robert Half Technology’s Technical Services IT team and to be involved in technical support and maintenance of their IT Infrastructure, Databases and services. This is appealing to me because I would like to work for a company that is technology based that has a position available near Melbourne because it would be easy for me to get to. Also, data interests me so working as a Database Admin for a big company would be a good career goal. For the position, a big amount of skill is required. You must be able to problem solve issues across systems and database infrastructure, install, configure and maintain databases in technical server environments. For the position you must also have successful experience with Microsoft’s SQL, Amazon Web Services, troubleshooting and fixing database issues and scripting, automation in C#, HTML, PHP, VB,net and PowerShell. At the start of my first year in university I only have experience in fixing database issues, and I have started to learn HTML and software like SQL. I will obtain the skills necessary by completing my Bachelor of IT while picking more electives related to data analysation. From they I will work as a database analyst until I have possessed the skills necessary in problem solving, software related to data to become a database manager and from years of working I’ll work my way up to becoming a senior database manager.

**Andrew:**A software automation engineer would be my [Ideal Job.](https://www.glassdoor.com.au/Job/fremont-automation-engineer-jobs-SRCH_IL.0,7_IC1147355_KO8,27.htm?rdserp=true&jl=3100735133&jaguid=&src=GD_JOB_AD&srs=EI_JOBS&s=21&ao=374997) When I first saw Tesla’s auto drive, I was astonished at its capabilities and was instantly attracted to the idea of a car that had the capability to drive you home. I think in the future that a lot of things around the world would become automated. Having transport become the first, I believe is a huge leap into the future, is incredible. I think if I could start working in the automation industry, it would cover a huge range of what I would need to learn for the future. This would prepare me to become more adaptable in the future. Especially with the soon expected life on mars, where for now, all things are automated.

The job itself is what I believe the product of the IT course. It requires the developer to have at least 5 years of experience with testing on automation frameworks as well as testing of management tools for CI/CD, for example, they recommend the Jenkins software found in Java. It does require a master of computer science or something else related. To have an excellent understanding of data structures and algorithms, to be committed to writing plenty of high-quality software. Have a good fundamental understanding of QA concepts, terminology and lifecycles. The good thing is it requires a minimum of 5 years of experience of languages such as go, Python or Java to which I have already started. Heavy understanding and experience with developing scripts using shell, Perl or something similar. Knowledge of working with a full-development lifecycle of large-scale industrial or service based applications. Finally, experience with the Linux system including network configuration, web technologies, system settings, common commands/utilities.

Currently, I’m passionate but still new to the world of IT. I have only a couple months of experience with a language (java) and some basic knowledge with python. I have little to no experience with Linux.

Firstly, I believe I should figure out what the terms that the job required mean. Besides that, utilising the most of RMIT would be the best thing, for now, making sure I never miss a lecture and always do the work that is requested of me. To keep up to date is probably the hardest thing for me to do right now since I find everything very hard. I started to also use some external learning services such as code academy to learn more about languages and have also downloaded a Linux operating software on my computer so I can dabble with it. I’ve also been going to CSIT for help and getting to learn more from the sophomores and third years on the side. This has been very enlightening to me as well as helpful in better understanding the lectures. I try and meet new people who have had more experience with IT or anything IT related. So far I’ve met many nice and helpful people that are willing to spare me their time so I can gather a better understanding of coding and the general stuff.

**Comparison of Ideal Jobs:**

Andrew: Software Automation Engineer  
Patrick: Senior Network/Security Engineer  
Christian: Senior Database Administrator

**What common elements are there, if any?**Between the 3 different jobs, they all share some of the same elements. All 3 jobs require the employee to work in a team that plays a certain role for a company, for example, a Software Automation Engineer has to join a small team to help build software for a company’s systems for their products. A Senior Network/Security Engineer joins a company's professional services team to lead network and security functions for customers and a Senior Database Administrator works in a Technical Services IT team to support and maintain a company's IT infrastructure, database and services. Other common elements for the 3 jobs is that they require years of hands on experience in their related field, they all require expert knowledge in their related software, the employee will have strong interpersonal communication skills to be able to communicate with team members and for each position they require tertiary qualifications in either IT, Computer Science or related disciplines.

**What differentiates each position from the others, if anything?**What differentiates from each position is the in depth knowledge and the roles of the fields. A Senior Database Administrator focuses on development and maintenance of server database systems while being an expert in understanding SQL software, Amazon Web Services, Microsoft Azure and the whole process of designing, creating and fixing databases. A senior Network/Security Engineer focuses on leading network and security functions in a customer environment, they will be experts in understanding and utilising networking, security and cloud computing. This differs from the rest because of the knowledge of different software and hardware like routing and switching within a Cisco environment and firewall architecture. Finally a Software Automation Engineer focuses on building world class software for a company’s systems that manufactures their products such as cars, this position would also require the employee to have expert knowledge on automation framework tools, software programming and an understanding of QA concepts, terminology and lifecycles.

**How similar or different are your career plans across the group?**

Our career plans across the group are structured out in similar ways. We all plan to obtain the knowledge and skills that we need from related courses in the Information Technology bachelor which will either lead into another course such as Computer Science or Software engineering for Patrick and Andrew to help strengthen their skills in programming software and then into finding a job in the related industry which leads to building up the needed practical experience leading up to the more expert and senior roles our chosen industries.

**INDUSTRY DATA**

1. What are the Job Titles for your group’s ideal jobs? How do each of these rank in terms of demand from employers?

Our group’s ideal jobs titles are a **Software Automation Engineer** for Tesla, a **Senior Network/Security Engineer** for Sparx Solutions and **Senior Database Administrator** for a technical services team. In terms of demand from employers taken from March 2018 Burning Glass data, Software developers and engineers take up 24% of occupation demands meaning that a **Software Automation Engineer** more in demand. Second in demand at 8% is a **Network/Security Engineer** and then finally at 3% a **Database Administrator** is third in demand out of the 3 jobs.

2. From your group’s ideal jobs, you can identify a set of skills required for these jobs (we will refer to this as your group’s required skill set). These can be divided into general skills (communication, problem solving, writing etc) and IT-specific skills (Javascript, SQL, etc).

a. How do the IT-specific skills in your required skill set rank in terms of demand from employers?

A **Senior Database Administrator** requires technical skill in **Structured Query Language** (SQL) programming language and skills with **Microsoft Windows**, **Unix, Database Management Systems** such as **Oracle** and **Technical support**. According to the March 2018 Burning Glass Data on IT skills in demand, a Database Administrator has a couple of skills in the highest demands. SQL programming is the most important thing that a database administrator needs to have skill in and **SQL** is the IT skill in greatest demand with **3570** postings. Out of all operating system skills, **Microsoft Windows** sits 4th in the most IT skill in demand with **2699** postings. **Technical support** postings are at **1830** and skills in **Oracle** are at **1313**. In conclusion, the skill set for a Database Administrator are highly wanted by employers.

A **Software Automation Engineer** requires technical skill in coding languages such as **Java**, **JavaScript** and **Python**. They also require in depth knowledge and skills related to **Software Engineering**, **Linux** and **Systems Engineering**. According to the March 2018 Burning Glass Data on IT skills in demand, the demands for programming languages for a **Software Automation Engineer** are high with **JavaScript** having **2946** demands, **Java** having **2860** demands and **Python** having **1150** postings. For the other IT related skills, **Software Engineering** had **1372** postings, **Systems Engineering** had **1037** postings and the operating systems **Linux** had **1632** demands meaning that the skill set for a **Software Automation Engineer** is wanted by employers because of their knowledge in a vast amount of skills.

A **Senior Network/Security Engineer** requires technical skills such as **Network Routing and Switching**, **Microsoft Azure environments**, **Cisco Environments and Extensive security design and implementation**. According to the March 2018 Burning Glass Data on IT skills in demand, **Microsoft Azure** is included in the **1341** demands for Microsoft Office applications and the network and security skills fall under systems engineering which has **1037** demands. To conclude the skills of a **Senior Network/Security Engineer** are in demand but not as much as a software automation engineer or database administrator.

b. How do the general skills in your required skill set rank in terms of demand from employers?

A **Senior Database Administrator** requires the general skills of; problem solving, troubleshooting, team work, analytical skills, planning and communication skills. With this skill set, the employee will be able to solve problems in databases, troubleshoot issues, work as a team, analysis databases and be able to communicate with your clients/team. According to the March 2018 Burning Glass Data on baseline skills in demand, Communication skills are the most in demand at 44367 demands, problem solving has 16445 demands, 11471 for troubleshooting, 11315 for planning and only 2997 demands for analytical skills.

A **Software Automation Engineer** requires the general skills of; organisational skills, teamwork collaboration, communication skills and troubleshooting. With this baseline skillset, the employee will be able to able to work in a team while being able to communicate with them. The employee will will able to troubleshoot system problems and have skills in working in for an organisation. According to the March 2018 Burning Glass Data on baseline skills in demand, communication skills are at demand in 44367 jobs, teamwork collaboration is demanded in 14264 jobs, troubleshooting is demanded in 11471 jobs and organisation skills are demanded in 15844 jobs.

A **Senior Network/Security Engineer** requires the general skills of; teamwork collaboration, troubleshooting, planning, problem solving and communication skills. They need these skills so they can work in a team and communicate with clients and employees, the need skills of planning to also plan their networks and security methods for organisations. According to the March 2018 Burning Glass Data on baseline skills in demand, communication skills are the highest in demand at 44367 jobs requiring it followed by, problem solving at 16445, teamwork collaboration at 14364 and planning required in 11315 jobs.

c. What are the three highest ranked IT-specific skills which are not in your required skill set?

The three highest ranked IT skills that are not required for a Database Administrators according to the March 2018 Burning Glass Data on IT skills in demand are JavaScript at 2946 demands, Java at 2860 demands and Project management at 2252 demands.

The three highest ranked IT skills that are not required for a Software Automation Engineer according to the March 2018 Burning Glass Data on IT skills in demand are SQL programming at 3570 job demands, Project management at 2252 demands and SAP skills at 2189 demands.

The three highest ranked IT skills that are not required for Senior Network/Security Engineer according to the March 2018 Burning Glass Data on IT skills in demand are SQL programming at 3570 job demands, Project management at 2252 demands and SAP skills at 2189 demands.

d. What are the three highest ranked general skills which are not in your required skill set?

The three highest ranked baseline skills that are not required for Database Administrators according to the March 2018 Burning Glass Data on baseline skills in demand are organisational skills at 15844 demands, writing skills at 15590 demands and detail-oriented skills at 8298 demands.

The three highest ranked baseline skills that are not required for Software Automation Engineer

according to the March 2018 Burning Glass Data on baseline skills in demand are problem solving skills at 16445, writing at 15590 depends and planning at 11315 depends.

The three highest ranked baseline skills that are not required for Senior Network/Security Engineer according to the March 2018 Burning Glass Data on baseline skills in demand are Organisational skills at 15844 demands, writing skills at 15590 demands and planning at 11315 demands.

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

Christian: I have looked at the March 2018 Burning glass data and my ideal job hasn’t changed because i’ve learnt from the data the SQL is in demand which is related to my field.

Patrick: Having looked at the Burning Glass data for the Top Generic skills I can see that the Networking side(3226) are ranked lower in the Job Postings compared to SQL(17,570). But in the Top IT Job Titles Network Engineer is ranked fairly up in the ranks coming in at rank 9 at 666 while Solutions Architect is ranked at number one with 987 job postings. By looking at these statistics I feel that my opinion of my ideal job won’t change at all because I quite enjoy working in the networking field of I.T.

**IT WORK**

View, summarise and discuss at least 10 YouTube videos or other web sources (you

may be surprised how many hits there are for a Google search on A day in the life of

an IT professional ).

If you choose the web sources option, you need to report on 5 different IT professionals, as

well as indicate your 10 sources.

Whichever source of information you use, you should answer the following questions.

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

2. What kinds of people does the IT professional interact with? Are they other IT

professionals? Clients? Investors? The general public?

3. Where does the IT professional spend most of their time?

4. What aspect of their position is most challenging?

IT Professional 1: <https://www.youtube.com/watch?v=KzxNgPafgrw>

**Xuebing Li - Software Engineer, Zendesk - Certified Solution Architect**

* Sits at computer and ”punch a few case jobs and crosses finger that he hopes everything works and operates in the production environment. Started as a freelance web developer creating web apps for fun and profit. Then eventually moving to Zendesk after a few career choice.
* Standup Meeting 10am - 5 minutes making everyone stand up and tell the product manager what you did yesterday and what you going to do today.
* Meetings, coding, active group (tech talk with other employees)

**IT TECHNOLOGIES**

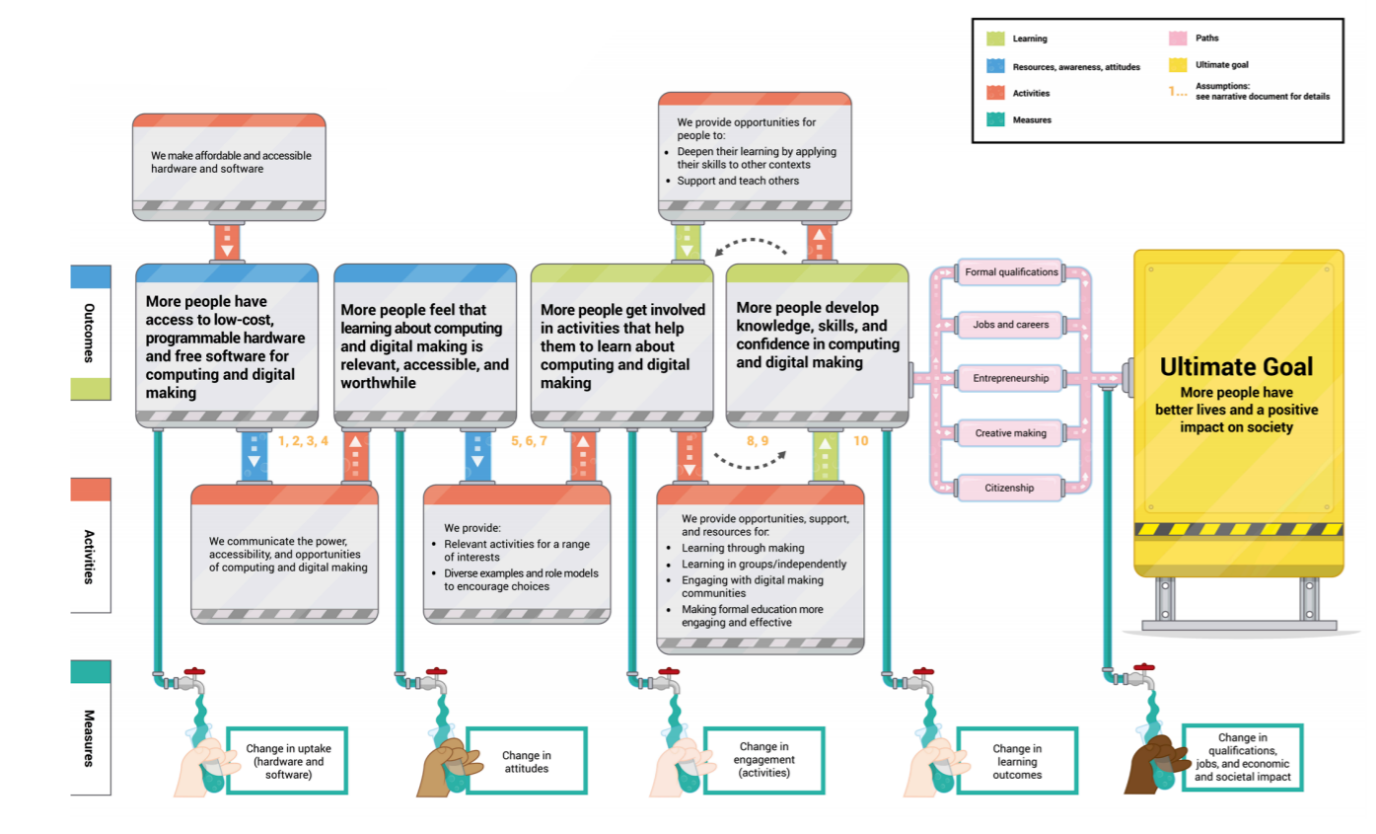
**Patrick: Raspberry Pi**

Raspberry Pi is a small computer that is priced around $25 – $35. It was created by the ‘Raspberry Pi Foundation’ which is a UK charity which was designed to help educate anyone in computing. The group was established by a group of academics at the University of Cambridge's Computer Laboratory as they were concerned in the decline of numbers of students applying to Computer Science. The group of academics felt that what today's school children learn in ICT classes leaves them uninspired and ignorant about the way computers work, they tackled the issue by providing this Raspberry Pi device to teachers at primary and secondary school to introduce programming and computer skills training. In the early 2013's Google decided to help back the Raspberry Pi Foundation. Google help provide 15,000 Raspberry Pi Model Bs for school kids around the UK.

Raspberry Pi runs on Linux which is a free open-source operating system. The small computer is extremely versatile, it contains pins called “GPIO” (General Purpose Input Output) which helps the user to interact with basically everything in the physical world. With some programming you can control them or detect what they are doing. The main purpose for the creation of the Raspberry Pi was built on the idea of making a low-cost educational microcomputer for students and children. Some people buy a Raspberry Pi to learn to code, and people who can already code use the Pi to learn to code electronics for physical projects. The Raspberry Pi can open opportunities for you to create your own home automation projects, which is popular among the people in the open source community because it puts you in control, rather than using a proprietary closed system . For example. You could use it as a media streamer, home automation, old-school gaming emulator or even as a Wi-Fi network extender.

**What is the likely impact?**

The impact of the development of Raspberry Pi would be very positive. The whole reason why Raspberry Pi was designed was to help educate students, children and even adults at a low cost. Personally I think that people won't be affected by the production of the Raspberry Pi. If I had known about Raspberry Pi or if it was introduced around the time that I was in primary school or high school I feel that I would've been more interested in the coding side of I.T.

The Raspberry Pi Foundation set out an “Ultimate Goal” - Their Ultimate goals is for “more people to have better lives and positive impact on society because they have learned how to make things with technology.” They do this by helping people learn about computers and how to make things with computers. This can be seen in the diagram down below. The Foundation made the hardware and software of the Raspberry Pi affordable and easily accessible(Free Operating System - “Raspbian”; comes with pre-installed office(Apache OpenOffice), many other features). With more people having access to low-cost programmable hardware and free software for computing this would eventually allow people to develop the knowledge, skills and confidence in computing and digital making. Therefore allowing people to find jobs and maybe even a career in the field. 

**How will this affect you?**

In my daily life I feel that the Raspberry Pi would affect me in a positive way. This is because I feel that the Raspberry Pi is very flexible meaning that it can be used for basically anything. One thing that has caught my eye is that Raspberry Pi can be used as a Smart Home Automation tool. “Home Assistant” is one of the fastest growing automation home platform, and is one of the biggest open source automation platform. It currently supports over 740+ components, this can be linked to your Apple TV, your Google Home, Alexa, Camera motion detector, or maybe a light on your front porch or inside your house. I hope that in the future that everyone will be implementing something along the lines of “Home Assistant” into their everyday living, because I  feel that it would just make life easier in the long run. Imagine having a Smart house that you could just turn off the lights with just your voice.

What is a Raspberry Pi?", *Opensource.com*, 2019. [Online]. Available: https://opensource.com/resources/raspberry-pi. [Accessed: 04- May- 2019].

Is the Raspberry Pi an innovation in computer training, or just another toy?", *The Conversation*, 2019. [Online]. Available: http://theconversation.com/is-the-raspberry-pi-an-innovation-in-computer-training-or-just-another-toy-18813. [Accessed: 04- May- 2019].

15,000 Raspberry Pis for UK schools - thanks Google! - Raspberry Pi", *Raspberry Pi*, 2019. [Online]. Available: https://www.raspberrypi.org/blog/15000-raspberry-pis-for-uk-schools-thanks-google/. [Accessed: 04- May- 2019].

*raspberrypi.org*, 2019. [Online]. Available: https://static.raspberrypi.org/files/Raspberry-Pi-Foundation-Theory-of-Change.pdf. [Accessed: 04- May- 2019].

**Christian:** **Cybersecurity**In our current age of society, information is an increasing component in human development, combined with the vast amount of technology we have today we as people are able to have digital information and networks to run organisations, businesses and institutions. Unfortunately, all systems, networks and digital information is vulnerable to cyberattacks, which are digital attacks on the systems, networks and digital information of an organisation with the purpose of obtaining or destroying sensitive information, extorting money and disrupting organisations. The practice of preventing and protecting against this is called Cybersecurity. Implementing efficacious cybersecurity actions is a priority because in today’s age there are more devices than people and there will always be constant attackers trying to access other’s information for their own benefit. Cybersecurity relates to having multiple layers of protections on devices, programs and networks. Currently in today’s age the layers of protection can range from the new technology on our devices to the users own understanding of the threats to their data. As everyday users of technology, we must be aware of the dangers by learning and complying with data security principles. For example, we can keep our devices software up to data which updates potential bugs and exploits, preventing risks of losing your data. We also can have passwords with a strong mix of different characters and numbers which protects unwanted people from accessing out accounts and we must be aware of any suspicious files or URLS which can spread malware to devices. Technology is essential in cybersecurity because it stops attacks during and before they even happen. Common technology such as firewalls, DNS filtering, antivirus software and malware protection can provide cybersecurity for individuals and organisations. A firewall is a network security software that monitors incoming and outgoing network traffic for a device and decides what gets passed to the device based on inspections and user decisions. Domain Name System filtering or DNS filtering is a filtering/blocking method that is implemented into devices to prevent the user from easily accessing malicious websites or IP addresses, this works by remembering malicious websites and IP addresses and blocks them when users try to access them. Antivirus and Anti-malware software are aimed to detect and remove viruses and malware that entering your device or on your device at the time. All of this together forms the National Institute of Standards and Technology Framework which aims to recover data, identify dangers, protect devices, detect issues and respond to them. Cybersecurity is important for anyone and for any organisation because an attack can lead to a loss/leak of private data, ensuring that the correct methods of cybersecurity are implemented means that it keeps our everyday lives running the way they should be. In the future cybersecurity will be able to support organisations, individuals and even nations more efficiently and effectively. This will be possible because nations along with organisations will continue to develop cybersecurity technology. In the future advancements of information technology, we expect there to be more devices that are with our everyday lives such as cars developed from automation engineering.  With more technology leads to more chances of cyberattacks because technology would be denser among society, the increase of technology leads to the increase of more cyberattacks which causes the booming development of cybersecurity in everyday life.

The potential impact of the booming cyber security industry is the reliable security of technology. The things most likely to change along with the development of the industry is the development of cybercrime. With the development of technology, more criminal groups will turn to or continue to seek ways to cyberattack for financial gain and potentially terrorist groups will move into the cyberspace to inflict harm. To counter this the nations and organisations of the world will develop more cybersecurity technology to protect the cyberspace. From the development the people that are most affected are individuals and organisations. As individuals, we will have more reassurance when it comes protecting our data stored online and on our devices because of new and stronger technology of cybersecurity. For organisations that people rely on such as power plants and hospitals will be secured from cyber attacks because of the newly strong and developed cybersecurity infrastructure which will allow organisations to run smoothly. This will create a lot of jobs as individuals with cyber security skills are highly wanted but are in short supply. A Cisco report on cybersecurity skill shortages states that there were a million cybersecurity related jobs open globally and that the demand is expected to rise to  million in the year of 2019.

In my daily life, the cybersecurity software will provide helpful in securing my data on devices by protecting it from malicious attacks. But most importantly, my cybersecurity principles will affect me the most because I will be aware of all the dangers and I will utilise strong passwords and my knowledge of avoiding malicious sites/files to protect my data. I also use online services such as discord and google drive to keep data and the development of cybersecurity infrastructure will protect them thus protecting my data store on their servers. For my family and friends that have devices, they will be able to utilise the same knowledge and software that I process to help protect data which will allow our daily lives to run as smooth as possible thanks to the reassurance from cybersecurity.

Services, P. (2019). What Is Cybersecurity?. [online] Cisco. Available at: https://www.cisco.com/c/en/us/products/security/what-is-cybersecurity.html [Accessed 3 May 2019].

NIST. (2019). Cybersecurity Framework. [online] Available at: https://www.nist.gov/cyberframework [Accessed 3 May 2019].

Insight - by CSU. (2019). The future of cyber security - Insight - by CSU. [online] Available at: https://insight.futurestudents.csu.edu.au/the-future-of-cyber-security/ [Accessed 4 May 2019].

Cisco.com. (2019). [online] Available at:

https://www.cisco.com/c/dam/en/us/products/collateral/security/cybersecurity-talent.pdf [Accessed 4 May 2019].

**Andrew: Autonomous Vehicles and BlockChain**

**What Does it do?**

Before getting into the details, it should first be required to define what a autonomous vehicle is. Based on the definition given by Technopedia, a autonomous vehicle is “a vehicle that can guide itself without human conduction.” From this, we can identify that it must be a vehicle, that means to be capable of transporting people or goods on land, and “guide itself without human conduction”; meaning that it shouldn’t rely on the human's input to get to a designated goal.

The way autonomous vehicles are rated is based on a stacking 6 level system where the previous upgrade will keep stack onto the next beginning at level 0.

**Level 0:** No automation

At this level the car is highly reliant on the driver, meaning the car has zero sense of automation.

**Level 1:** Driver Assistant

From here on, the car is able to help with driving such as maintaining speed, accelerating, decelerating and some steering. This is where most vehicles on the market are at.

**Level 2:** Partial Automation

A level 2 automation means that the vehicle is able to assist in more driving functions such as emergency braking or adaptive cruise control. These are still 100% reliant on the driver to be responsive to the cars’ surroundings however, it is a gradual transfer of control where it goes from man to machine. An example of this is Tesla Autopilot.

**Level 3:** Conditional Automation

There is a noticeable difference from level 2 and 3 being that the vehicle is able to now properly function on its on if the conditions are met. At this level, the vehicle is able to handle both the level of steering and acceleration/deceleration to navigate on highways. Thought the driver is still required to handle the situation at a moments notice, it is still capable to handle itself in certain parts. An example of this is Audi Ai traffic jam pilot.

**Level 4:** Higher Automation

At this point, there is no need for a human pilot to operate the vehicle however, is still able to if they so choose to. The vehicle is now capable to operate on its own “under certain conditions”, there are test vehicles on the road that operate at this level. An example of this would be the Waymo LLC which is the google test vehicle. From here they are capable to switch lanes, indicate, steer,brake,  accel and decelerate if need be. At this point, the “under certain conditions” must be determined by the Ai in the car to allow it to be enabled for the driver to allow for it to engage.

**Level 5:** Full Automation

Once here, the vehicle is no longer requires any human interaction and should function under all driving conditions and be able to navigate on its own. Essentially, it is a automatic taxi where the people using it are all just passengers. There no longer need to be a break, pedal or a steering wheel as all critical conditions are all operated through the vehicle’s sensors to operate.

Thereby, at this stage, the highest level of automation in land vehicles is Tesla’s autopilot, where it is commercially available at the level of 2 to 3. Despite, Waymo being at level 4, the vehicles are not conditioned for daily use unlike the Tesla’s autopilot and is why I’ve rated that as of now, we are still currently only at level 2-3 in terms of autonomous vehicles.

The future of fully autonomous vehicles is, according to the .extremetech.com, estimated to be “getting further away, not closer”, however it is getting better as the industry uses “more precise inertial sensors, cameras better dealing with bad lighting conditions, miniaturized LIDAR sensors adapted for vehicle integration” with the addition of “active 3-D cameras getting suited to outdoor environments, and of course faster computers to handle this growing amount of data” there is a definite hope for autonomous vehicles getting better and better according to ieeexplore.ieee.org. With this there is hope for testing of vehicles in special conditions where road lines and construction sites are implemented into testing the capabilities of said vehicles. However, law is a limitation as these vehicles still require a driver holding the steering wheel. To overcome some of these issue, there still needs to be human road testing to allow for vehicles to adapt to the drivers own choices and actions, this also means the drivers must always comply to the road rules. To overcome the limitation of have a vehicle not having “experience” a new situation, it must run thought millions of simulations and yet might not ever

"What is an Autonomous Car? - Definition from Techopedia", *Techopedia.com*, 2019. [Online]. Available: https://www.techopedia.com/definition/30056/autonomous-car. [Accessed: 01- May- 2019].

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"Autonomous Ground Vehicles—Concepts and a Path to the Future - IEEE Journals & Magazine", *Ieeexplore.ieee.org*, 2019. [Online]. Available: https://ieeexplore.ieee.org/abstract/document/6179503. [Accessed: 01- May- 2019].

**Project Idea**



“Starved” will be a social mobile application based on the Google Android Play Store and iOS; that allows users to search for nearby restaurants via the user’s location. The application will allow users to review, check the menu and prices, check reviews and even rate/check ratings for the restaurants and view users uploaded images. The application will be Melbourne based but soon will be expanded to other states in Australian then worldwide.

[1]"According to the Australian Bureau of Statistics via a household spending survey, shows that the average spending of an Australian is roughly $80 a week on take out dining food, up by nearly a third on the $63 spent in 2009-10 financial year. Eating out at restaurants or even ordering deliveries are now the trend. Statistics showing that Millennials and even adults under 34 are now spending at least $100 per week which is a rise of 37% from the $73 spent six years ago. Therefore, we think that by developing “Starved” we think that it will be useful for the general consumers.

Reference: [1]"Aussies ditch home cooked meals for takeaway", Dailytelegraph.com.au, 2019. [Online]. Available:[Link Here](https://www.dailytelegraph.com.au/news/nsw/abs-household-expenditure-survey-shows-australians-spending-more-on-restaurants-and-takeaway/news-story/5d71d67f8239e3442906f9431fd5dbca.) [Accessed: 31- Mar- 2019].

The application will first have a “login” and “signup” feature alongside a “join later” choice. By providing a login feature it allows users to review/post photos on restaurant pages on the application. “Starved” will have a search function which will provide an advanced search option which you can search by categories such as cuisines, cost price range, buffets, breakfast, lunch, desserts, if the restaurant or café provides free Wi-Fi, Fine dining or if I provides outdoor seating, cash only or credit card available and many more such as Vegan friendly. The search function will also have an inbuilt map button, by pressing that map button it will provide you all the restaurants around your GPS location from your phone. For Example, it will show you how far the restaurant is and its rating. A function we would like to include is to implement a button that will show you the directions to get to the restaurant too. By posting reviews on every restaurant you can level up your profile for “Starved” which will then allow you to gain perks such as VIP booking to certain restaurants or even discounts as long as they are working with “Starved” to provide those perks. This will then inspire people to become Instagram Food bloggers or what they would be nicknamed as “foodies”.

**FEEDBACK**

**GROUP REFLECTION**

Towards the end of the assignment period, you should reflect as a group on how well you think you have performed in this assignment. You should include whatever evidence you may have about the groups processes (such as commit trails from GitHub, or project meeting minutes). Each member of the group should contribute up to 200 words about their own perception of the group, and the group as a whole should contribute around 400 words.

This should include the following attributes.

● What went well

● What could be improved

● At least one thing that was surprising

● At least one thing that you have learned about groups

● Remember to include in your section on Tools how well you think your Github log of activity reflects your group’s work on this assignment.