

Assignment 2: The IT World – MACPY's

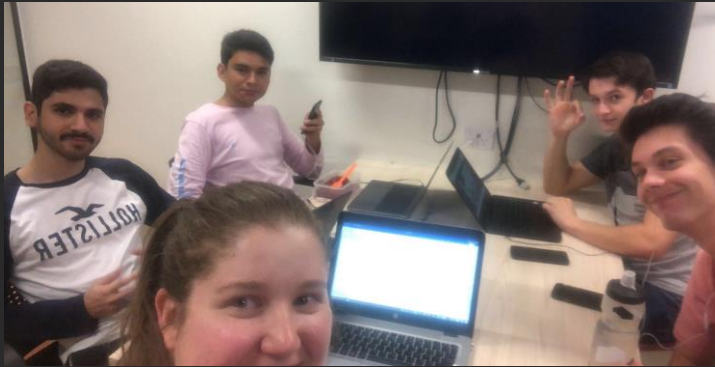
1. Team Profile
2. Tools
3. Industry Data
4. IT Work
5. IT Technologies
6. Project Ideas
7. Group Reflection

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Team Profile

- Our team profile has been hosted as a website. Please see this link:

<http://macpys-website-assignment2.s3-website-ap-southeast-2.amazonaws.com/>



2

Tools

- The link for our GitHub repository is:

<https://github.com/melissa-smith/assignment2.git>

The commit history is mainly from Melissa as she has set up the repository and most of our information was sent to her to collate. We also used GitHub to track all of our tasks.

3

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?



Aria Motamedi
Senior Security Engineer



Caleb McCash
Gameplay Engineer



Yousef Fares
Project Manager



Melissa Smith
Business Analyst



Peter Margaritis
Senior Software Engineer

The ideal jobs for our group are generally not high in demand. Pete's role of a Senior Software Engineer is ranked highly having both Software Engineer and Senior Software Engineer on the Top IT Jobs list. The roles in security and gameplay are not seen on the list neither is anything similar. The roles of Project Manager and Business Analyst are surprisingly not in the top IT jobs however this could be due to the nature of the roles not always being specifically IT.

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Industry Data

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).

Project Management

Stakeholder Engagement
(Building effective relationships)

Optimising Code

Communication Skills

Business Analysis

Python Experience

3

Industry Data

2a)

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

We had a few IT specific skills our list, Optimising code, Project management, Business analysis and Python experience. Many of these skills were in high demand on the list of IT specific skills. This is great for the jobs that we want to get in to and many of these skills are also transferrable across many industries (not just IT).

2b)

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

One of our skills listed is the highest ranked skill in demand. Communication skills is required for every single job you do, whether it is communicating with team members or external parties.

2c)

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

SQL, Javascript, Java

2d)

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

Customer Service, Scrum, Business Process

3)

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

All members of our groups opinions have not changed. This is due to two reasons:

For those who don't have a role on the high demand list, this shows that their role is specialised and believe that the skillset that they have will ensure that they exceed in this role. It is important that there is a standout reason as to why the person applying is the best candidate as there will be high competition as the role is not in demand.

For those who do have a role on the high demand list, this will mean that there will be availability for these roles moving in to the future and likely that there will be a few different companies to choose from.

4

IT Work



Interviewed: Anya Fitzgibbon

Position: IT Project Manager

1)

What kind of work is done by the IT professional?

The professional works in Project Management in IT. They deliver new energy solutions to market by ensuring that the product is available and ready, the systems are developed/updated, the people are trained and have all the right tools to complete their job and that the legal and policy requirements are all met. The professional will usually run 1-3 projects at a time depending on the size. This is mostly software based solutions such as an energy monitoring platform or the Tesla Powerwall 2 roll out to the Australian market.

2)

What kinds of people does the IT professional interact with? Are they other IT professionals? Clients? Investors? The general public?

The professional interacts with many different people on a daily basis. This includes but is not limited to: their team members (developers, testers, software architects, system administrators), internal stakeholders (customer service team members, sales teams, leaders, senior management), external stakeholders (third party vendors, regulators, retailers) and customers (general public, business owners).

3)

Where does the IT professional spend most of their time?

The professional spends most of their time in the office, attending meetings. They spend approximately 5 hours a day in meetings and 3 hours at their desk working. They travel interstate once a month for work and attend vendors offices approximately once a fortnight.

4)

What aspect of their position is most challenging?

The most challenging part of their position is the stakeholder engagement and management. Every stakeholder on the project needs to be informed on the progress of the project. It is also difficult to have stakeholders make decisions. As a project manager it is not your responsibility to make the decisions but facilitate others to do. This can be challenging as some stakeholders do not want to make a decision due to a range of circumstances. This could be that they don't want to be responsible if something goes wrong or that they do not have the time to think it through. Moving forward in any career you have, people will always be the biggest challenge but the most rewarding part of your job.

5 IT Technologies – Autonomous Vehicles

What does this technology do?

What is the state of the art of this new technology?

Two systems prove themselves ahead of the rest when it comes to autonomous vehicle systems. These are Cadillac's "Super Cruise" and Tesla's "Autopilot".

Cadillac Super Cruise is capable of zero driver intervention, but only on roads that have been mapped out by Cadillac, which is currently a limited amount.

Tesla's Autopilot mostly makes itself useful when the car is being used on a highway or in parking. On the highway it is able to control the vehicle by regulating speed, changing lanes, adhering to curves in the road, and following the best path to the destination. When parking, it is able to control the car so that it parks itself. However, Autopilot ensures that the driver is aware when these processes are happening by making the driver keep their hands on the wheel, otherwise the system will pull over and temporarily deactivate itself.

Most other manufacturers have developed their own systems for autonomy but they do not yet provide as much as Tesla and Cadillac. For example, systems such as Audi's "Traffic Jam Pilot" aren't yet able to fully compete with the state of the art technology, only filling the niche of driving in traffic jams.

What can be done now?

Vehicle autonomy is measured on a scale from 0 to 5. A fully manual, driver-operated car is at level 0, whereas a fully autonomous car that does not require a driver at all to function is at level 5. Technology differs between car manufacturers.

As mentioned above, Super Cruise and Autopilot are at the top of the line, capable of nearly fully autonomous driving.

Audi Traffic Jam Pilot is able to drive itself in dense traffic and congested roads under 60 kilometres an hour, regulating acceleration, braking and steering.

BMW's Active Lane Keeping And Traffic Jam Assistant provides similar assistance in speeds up to 60 km/h as well, keeping the vehicle in lane and ensuring the vehicle in front is within a safe distance by controlling speed.

In the same manner, both Nissan/Infiniti ProPilot and Mercedes-Benz Drive Pilot is also able to provide these functions of steering, braking, and maintaining distance.

Smaller, more independent companies are also developing systems to allow for self-driving abilities. For instance, George Hotz's startup Comma.ai has made a bundle of hardware which allows for an affordable kit to be integrated into your car, automating driving.

What is likely to be able to do be done soon (say in the next 3 years)?

Within 3 years it would not be unlikely for us to start to see many cars with level 5 autonomy hitting the roads. Already conceived technologies contributing to vehicle autonomy will be refined, and new technologies might be introduced to help reach level 5 autonomy. It's not easy to achieve this in all possible road conditions, however. It will take more time to ensure the certainty of the automation in strong weather conditions such as snow and heavy rain, as well as heavy traffic, unpredictable events and other circumstances.

What technological or other developments make this possible?

Laws need to be changed and technology needs to be further refined before level 5 autonomous vehicles can be fully implemented globally.

Before Australia sees an large influx of self-driving vehicles on its roads, the nation must first amend its legislation. This would ensure the use of autonomous vehicles is governed to the extent where it is safe to reasonably use this technology without fear of excessive criminal or civil repercussions.

The infrastructure on our roads also needs to be improved. In order to make roadways that are well integrated with the cars that drive on them, components such as traffic lights should be improved for coordination. Charging stations would also need to be introduced to accommodate the common electric-powered aspect of self-driving vehicles.

5 IT Technologies – Autonomous Vehicles

What is the likely impact of this technology?

What is the potential impact of this development?

At its furthest level, this technology has the potential to create a road network system in which every component is connected to each other. This could result in almost zero traffic as vehicles could coordinate their actions to achieve the highest efficiency possible. The road network could become fully automated, like a taxi service with no human drivers needed.

What is likely to change?

Laws will likely change in order to accommodate autonomous vehicles on our roads, as there is no avoiding the inevitable flood of these cars on our roads. In a few decades down the line, it would not be unlikely to see what's mentioned as the "potential impact of this development" come into fruition.

Which people will be most affected and how?

Anyone who has any association with vehicles will be affected by this change. That is, almost everyone living in this modern 21st century society. Those who have a higher degree invested in these vehicles, such as those with jobs heavy in vehicle use or manufacturing will be most at risk due to their reliance for a living on human-driven vehicles.

Will this create, replace, or make redundant any current jobs or technologies?

People with jobs surrounding vehicles will be affected the most.

Taxi drivers will eventually become redundant as the need for their driving is completely lost, with consumers probably opting for a safer, driverless experience. Already the taxi industry has taken a hit due to other technological services bringing competition, and the decline will only steepen once self driving cars can provide a similar service.

Truck drivers will also find themselves struggling against autonomous trucks. The systems used by these vehicles would not suffer from the same problems that current truck drivers do, like efficiency and fatigue. They would be able to work around the clock, only stopping to load, unload and charge.

In the same way, other delivery jobs will be impacted, such as those associated with the postal service.

Already established vehicle manufacturing will change to accommodate the need for automation, possibly changing the needed skills of vehicle mechanics and engineers.

5 IT Technologies – Autonomous Vehicles

How will this technology affect you?

In your daily life, how will this affect you?

Not only me, but everyone would be able to benefit from the easier lifestyle that autonomous vehicles grant. Much time would be saved, once people lives and schedules aren't constrained by the timetables of public transport and ever growing road congestion. Personally I would be able to have to time to spend how I wish, with the efficiency of these vehicles saving so much time for everyone.

The increased road efficiency which is entailed by autonomous vehicles will give me much more time to use the way I want to, it would provide me an extra degree of freedom.

The use of electrical autonomous vehicles will also prove useful years down the line by hopefully decreasing the amount of emissions. The environment would benefit from this decrease, and far into the future, this is something that will make a difference in my daily life to affect me. This is assuming, of course, that the electricity these vehicles run off are gained through environmentally sustainable means.

What will be different for you?

Going by the potential that this technology holds, if there was a full network of these systems on the road, it would be much easier, quicker and favourable to travel in and out of the city using a automated car where you only pay per ride, like a taxi. There could be no need for parking in the city because as soon as you end your trip, someone else rides the vehicle to their own destination. Thus there is no need for the vehicle to remain stagnant. This would be different for me because it would mean I travel into the city without having to rely on current public transport, which means I get there much faster.

How might this affect members of your family or your friends?

Members of my family and friends would be affected presumably the same way that I would be. That is, it would be generally easier to get around, cost less travel time, and provide more time doing what you need to be doing. In addition, they would be able to spend more time socially, as it would be easier to travel to and from your family and friends.

What does this technology do?

First of all, what is a robot? A robot is a machine capable of performing programmable actions automatically with humanlike skill. This can vary from robots like the robots shown in movies (although not quite the same, however using movie concepts to create the robots) to robots in company production lines to exoskeletons. Robots were first introduced to the world in 1954 by George Devol. This robot was named the Unimate and was sold to General Motors in 1961, where the company utilised the robot to lift pieces of hot metal. Fast forward to October 25th, 2017, Saudi Arabia became the first country to give citizenship to a robot. The robot was a humanoid robot called Sophia, built by Hanson Robotics. Sophia's developers have described her as an "evolving genius machine, who's intelligence increases over time." Sophia's Artificial Intelligence is based on the human traits of creativity, empathy and compassion. Sophia was so smart that she even took digs at Elon Musk, who is a known sceptic of robots, saying that Elon Musk has been watching too many Hollywood movies and reading too much, which shows how Artificial Intelligence has taken off, allowing robots to have a sense of humour.

It is predicted that by 2019, robot adoption in the manufacturing operations will have increased by one third, with 60% of global 2000 high-tech manufacturers implementing industrial robots and by 2020, 45% of the newly introduced industrial robots will be equipped with at least one of the following intelligence features:

- Predictive analysis
- Health condition awareness
- Self-diagnosis
- Peer learning
- Autonomous cognition

By 2021, there will be an emergence of intelligent robotic agents that supervise and coordinate the industrial robots and therefore increase their efficiency and effectiveness. These developments are all results of the advancement of artificial intelligence and programming. The term Artificial Intelligence has been around since 1956, when it was first introduced as a field by John McCarthy. It has since then, taken Artificial Intelligence 51 years to produce such robot as Sophia. That is a very fast development, as Sophia is a humanistic robot and is very complex and advanced. The fact that the Artificial Intelligence field has only been around for 51 years and already implemented into companies, militaries, everyday life and robots is astonishing. Siri was also a huge step for Artificial Intelligence. Apple made a software for the iPhone that can speak to the user and fulfil its needs using Artificial Intelligence. All these developments have helped robots come to life and make the average day a little easier.

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IT Technologies – Robots

What is the likely impact of this technology?

The impact of robots can already be seen in everyday life. The most evident impact is the way company productions has changed. This is evident in most car manufacturing companies and also companies such as Coca Cola and Yakult. These companies have replaced human work with Industrial Robots which has reduced jobs, whilst increasing productivity, efficiency and effectiveness. Google and Tesla's self-driving cars might be a huge wake up call to taxi services and companies such as Uber and Taxify. These self-driving cars can result in taxi drivers and Uber drivers to lose their jobs. However, these technologies are still developing and have not been fully approved yet, as they have not been fully tested. Tesla's autonomous option still requires the user to be aware of his/her surroundings and the Google autonomous vehicles have not been fully tested. Robots are also going to be implemented to make everyday chores easier. Such as cleaning, cooking and washing. This may result in hotels and other hospitality services getting rid of some of their staff and instead turning to robots to make everything easier. Robots are most likely to be faster and more efficient and effective than humans in achieving goals. However, this might cause great debate, as humans would not be too happy about losing their jobs to machines and companies would be very pro-robots as they can save money due to not having to pay any salaries or have any risk of work related injuries and staff not turning up.

How will this technology affect you?

This will affect me greatly. It can make my life easier or harder. It can get me from somewhere to somewhere else very fast or it can make it harder by not recognising my true needs. As much as robots can be humanised, they are not humans. The way we want tasks done, is not always the way the robots were programmed to complete the tasks. This can result in me either being very satisfied or very dissatisfied. This won't only affect me, but it will affect my friends and family. Everyone will be affected by robots. My parents can become uncomfortable with the robots as they are not used to them and this can make life very hard for them, whilst my brother and I can become used to the robots because we're still young and grew up with technology. If we have our own personalised robot, it can make growing up, going out and living in general much easier. The impact on my friends will be very similar too. Robots in general will make life easier for everyone.

5

IT Technologies – Chatbots

What does this technology do?

A chatbot is a revolution in the IT world. It is an artificial intelligence that conducts conversations via voice or text. This is used as a conversational tool that would usually be a person. Chatbots are currently used in place of a customer service representative or someone gathering information. You will see chatbots in messaging apps such as Facebook messenger or company's websites. Generally, most chatbots are at their early stage of development and use keywords that a user says or types to provide a generic scripted response. Usually the chatbot will pull the response with the most keywords and if no response is suited, it will advise the end user to contact a support team. However, recently there has been more advanced chatbots using natural-language processing. This is a more advanced artificial intelligence communication method and is when the chatbot will use 'machine learning' to develop responses to text or audio. These responses are not completely templated and this is what IT professionals link closer to a more realistic human interaction. This will continue to grow over time as the chatbots algorithms are developed and enhanced. Chatbots are not just used to respond using only audio or text but can be used in gaming or to complete a function or task. A recent example was from a company who had a complete redesign of their branding. Rather than having each person update their company profile manually or their customer documentation, you would send the photo or file to the chatbot, this would then update the photo with the new branding or update the file with the new logo (replacing where the old logo was).

Although chatbots seem like such a recent technology they have been around for decades starting in the early 60s. Chatbots then were given names and one of the most popular chatbots was ELIZA. ELIZA was provided scripts written in MAD-slip. The scripts provide rules on how ELIZA should respond, usually ELIZA would respond with part of the question or statement in the answer as this was seen as the chatbot being very intelligent. ELIZA was then discounted as being a revolutionary as the user's feedback was the ELIZA did not often understand what the user was asking or stating. This problem is still faced today by chatbots – even the most advanced chatbots will lack human understanding and feelings. Today, chatbots are replacing conversations that people would usually have with a company or person. For example, if you wanted to contact your internet provider about why your internet is not working, you would chat with them on their website or messaging service and they will provide an answer to the question. If the chatbot cannot answer, usually human interference will occur or a template to contact the organisations call centre will be sent. As a public user you would only really know of chatbots as messaging services or live chats with companies. Originally chatbots were accessed over the web or downloaded as DOS programs. You would download a chatbot like ELIZA and interact with the chatbot using a DOS program. Chatbots were created for many different reasons – to answer medical enquiries, to act as a companion, to gossip about what other users tell the chatbot and even to act as a 'magic 8-ball'.

5

IT Technologies – Chatbots

What is the likely impact of this technology?

The likely impact (and we are already starting to see this today) is that chatbots will replace customer service representatives. The current change in the professional world is the move to a more digital environment. As consumers we want to talk to our providers, when we want and how we want. This is starting to transform via phone to via digital platforms such as live chat. This move also means that as consumers we want to talk at times which are convenient to us which is after work and on the weekends. It will be very costly for companies to have staff during these hours so a chatbot will be a great outcome for all. This will not completely eliminate all customer service staff as consumers will still want to interact with humans. Chatbots will not and cannot replace the connection some consumers need. A chatbot cannot feel like a human and therefore characteristics such as empathy and personality flexing can only be felt through human interaction. Although chatbots can't interact like this right now, with machine learning this could develop in the future.

How will this technology affect you?

This will affect me in many different ways. As mentioned earlier this will ensure companies can provide me with service that I expect – that is talking to the company when I want to talk to them and in the way that I would like to interact. If companies were to offer chat services, this would mean that I would choose those companies over others as that is something that is important to me. This is similar to how it will affect my family and friends. In my group of friends, we often talk about how Australia is still behind the times digitally and that further development of chatbots will help us meet the needs of Australians.

Another way this will affect me is in my job. My company needs to commence its digital transformation now. We need to be the leader in this space and need to have a competitive advantage over other companies in the same industry. We can do this and one of the key parts of this transformation will be chatbots. We have implemented a chatbot internally as a test and there is still a long way for us to go to meet our customers' expectations.

Chatbots are a revolutionary that can benefit many different people and industries. Although chatbots have been around for a long time, the real development starts now as customer expectations have changed and we expect more.

What is a cloud computing, and what are cloud servers, and how are they used, how are they useful and are they superior to physical servers? Cloud servers work very much like a physical server. However, you might not even know what a traditional server is. This report is here to simplify the topic and further your understanding of clouds and servers, and predict what is likely to change, and how both individuals and companies might use cloud servers even more in the near future, and how likely cloud is to change your life, and they you might save your data if you're not already hooked up, and already using cloud.

The basic answer to cloud computing is that it's the usage of internet-based servers rather than the use of physical servers. So, the practice of using cloud servers is obviously making use of cloud computing. A server is a computer or computer program which manages access to a centralized resource or service in a network. Traditional servers and cloud servers are the two types of servers you will find when looking to create your own server. Traditional servers mainly branch to dedicated, and shared. What are the differences between them, and how do you choose the right option when looking to start your own server. Shared servers are the cheaper option if you're looking for a traditional server, it is suitable when the required capacity is low, and your looking to share the server with more than client. Dedicated servers are much more advanced form of servers, and is only limited to one client, with nobody else sharing it. Traffic needs to be predicted because if the traffic is relatively low, you will be paying more than necessary, and vice versa. Clouds servers, however, which is the most recent, you'll get the best of both worlds. You're able to scale the resource accordingly which allows for a more cost-effective server. When a certain cloud server has high demand, the capacity automatically adjusts to match demand without needing to pay on a basis. Cloud servers are also more redundant, meaning that if one server fails, other servers will take place. Cloud servers as of now are interesting enough and being put of such great use. However, in the IT industry, not only you should stay on track of the latest technological advancements, but you always should look to the future, you should innovate, and try guessing at the very least of what might happen, these guesses might become real. Innovations have always been once a simple thought that turned into reality. The next, and most anticipated step to change cloud servers would be decentralizing it. Centralized cloud has two main issues when it comes to meet the demands of a connected world; bandwidth, and latency. However, if we could accomplish to have each computing device have its own cloud server. The cloud servers would be much more efficient and more scalable. Also, it is also much more trustworthy having connected to your own decentralized server, and way more cost-effective than it already is as a centralized server.

At the end of 2015, 88% of entrepreneurs transferred their companies to clouds, and the number of entrepreneurs transferring to cloud servers is increasing, and that is only logical given that cloud servers are far more superior to traditional servers; cost wise and reliability. Market research firm Gartner said, "\$111 billion worth of IT spending will shift to cloud this year, and that number will almost double to \$216 billion by 2020". Many companies including tiny, and huge ones have always bought and maintained their own servers. However, public cloud providers including Amazon Web Services (AWS), Microsoft, Google, IBM offer rent for servers at much lower costs. So, it would only make sense for companies, both tiny and huge ones, to shift to these cloud servers. Paying less and saving up is ideal for any entrepreneur no matter their size. Especially when you're not missing out on anything really. It's not that you will be sacrificing features to be working with cloud servers. And, although cloud servers crashing like the incident that happened to Amazon services a while back is a possibility, the odds of that happening is really low. So, the basic answer to whether cloud servers have an impact on the current jobs or technologies is yes it will, in fact cloud servers are already so popular and if you're an entrepreneur and still are not on the wagon. You probably should start researching about it and consider a change. Cloud servers are not the end, in fact they are just the beginning.

Cloud computing is really popular and as an individual, you, your family, and friends are probably using it. You might know that, or you might just be unconsciously and naively using it. Such an example of cloud computing in your everyday life would be the Gmail services. Google hosts that service for you, and all you have to do is be connected to the internet. Google drive is also cloud based and all your storage is stored online. Google drive includes apps like Google Docs, Google Sheets, and Google Slides Google Maps, and so on. So, clearly google has hopped in the cloud boat. However, Google is not the only company doing it. In fact, many huge companies such as Apple, with iCloud. Amazon, which is a huge cloud service with multiple services. Microsoft, offering azure which is used to enhance web-hosted applications. Also, many users use cloud services for information storage, be it photos, music, or even programming codes. GitHub enables you to save codes in "Repositories", which is basically the name GitHub uses for workspace. All you have to do is create an online account and then your codes safely stored unless you choose to allow certain individuals to work with alongside you, creating a group. Cloud computing is clearly taking over the internet at a rapid rate, and that is not a big surprise now, is it? The potential for cloud computing is huge, and with potential future advancements, cloud computing is only just arising and growing by the day.

6

Project Idea

Overview

Alexa Games / Tabletop assist. This project will be the implementation of games onto an amazon Alexa via 'Alexa skills'. This will allow a user to use the amazon echo's (Alexa's) voice commands to either play games or be a usefull tool in playing games. This will make tabletop games easier to run, play and add a new element of voice into the equation. Commands such as 'alexa, roll a d6' will prompt the echo to roll a 6 sided dice. In a larger sense, this can be furthered into making Alexa compatible with text based adventure games or even make alexa able to play tabletop rpgs such as Pathfinder or Dungeons & Dragons.

Motivation

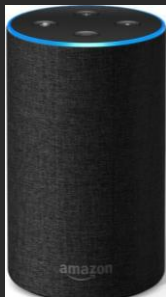
The reason to create this is that there is no real, full game skill on the alexa as it is a new technology, this project will be the first of its kind (other than the 20 questions game made). Which will open up new avenues for other developers to expand and create more games controlled by voice. In addition, it will also be a useful tool for existing games, like the aforementioned Pathfinder or Dungeons & Dragons, as it will reduce the need for human calculations for the mathematics behinds dice rolls. With the re-rising popularity of tabletop games, this will not only be an interesting addition, it will be a widespread utility for those who play.

Description

In essence, this is an 'Alexa skill' which is an 'addon' to the existing Amazon echo. This product will be using the amazon echo as a basis of its functionality. The amazon echo will take in voice commands, and the software created for the project will register specific keywords and from that produce different functions. Some of these functions will include:

- The ability to roll dice, ranging from 4, 6, 8, 10, 12 and 20 sided dice (as they are the standard for gaming dice). This includes the ability to roll multiple dice and give an output
- The ability for users to play premade 'text based adventure' modules. In which they use their voice to tell Alexa what they wish to do within the game.
- The basic ability to play paper, scissors, rock against Alexa
- The ability for Alexa to take in 'modules' and control a game such as Dungeons & Dragons, being able to do the math behind it and produce a story controlled by voice. Letting players play with a computer aid.
- The ability to run other board games, such as Monopoly. The program will understand how they are played, and will assist in dice rolls, keeping track of players (to reduce cheating or human error) and any other needed functions per board game

The product will be a simple downloadable addon on the Alexa skills store, meaning anyone with an Amazon Echo will be able to purchase the program and use it from their home echo. Ultimately creating one of the first voice controlled gaming platforms on a home device.



6

Project Idea

Tools and Technologies

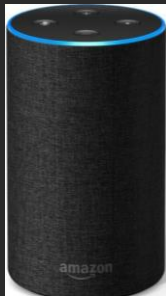
Due to the simplicity of the project, the only required software and hardware needed to create this project is an amazon alexa itself, and a computer with amazon lambda, which will allow the creation of the 'Alexa Skill'. The Amazon echo will be used for testing purposes and will be running the end product, while the PC will be used for the development of the software itself. Utilisation of some codebases or adventure games can be done in order to create a more consistent balanced experience, using already existing text based games in order to reduce development time.

Skills Required

The skills required for this software are straightforward, the only skills needed are basic programming knowledge / ability to program, knowledge of the creation of 'Alexa Skills' and a basic understanding of how board games and tabletop games work. Extra knowledge can be useful, such as those experienced in tabletop gaming, in order to make this product tailored and retain its relatability to users.

Outcome

Furthermore, the creation of this project will create a gaming platform via voice. This will bring new life into tabletop gaming and board games, and also will be a fun new idea to the Alexa Skills.



7

Group Reflection

As a group we know we can work really effectively when we all contribute. We know we started the assignment too late and as a result put pressure on ourselves. Next time we would start the assignment earlier and work together from the start. Unfortunately, we weren't all present in all tutorials and this impacted the share of the workload. We should communicate earlier and more effectively to ensure that this is not a problem moving forward.

What worked well?

The team is supportive of each other and everyone's opinions were valid. This ensured we felt that we were listened to and could trust each other. The team shared a mutual respect which enhanced our collaboration skills and engagement. Although our team had different personalities and skills, we used these to our advantage so that we could get tasks done quickly and efficiently.

What didn't work well?

Team attendance was not a strong point for our group. We did not communicate when people would be in the tutorials and it was also hard to find times to meet and get the assignment completed.

Something that surprised us was how quickly we could actually get the assignment if we were all present and worked as a group. If we had of done this earlier, we would have less pressure in the last week and would have resulted in an overall better report. This is a great learning and we will ensure we take this learning onboard for our next assignment.

Something we have learned about groups is that you will always get a varying degree of skills and experience. This can either help or hinder the collaboration and results of the group. Group work has a sense of unpredictability and if you are good at dealing with ambiguity, this can be a real positive and a great challenge. If you are not good at dealing with this, it can present negative challenges. However, in the end, the sense of unpredictability paired with a trusted group can result in a great overall experience.

Overall, the group worked extremely well together and are look forward to our next assignment and we would all be excited to work together again.

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Group Reflection

ARIA

What went well for me the fact that we communicated whenever we were together and we worked towards the same goal with a clear set of objectives and guidelines. We were also very quick with our work when we did it which helped out a lot as we did need to be quick.

What could have been improved was the fact that we were not very timely with doing the work which was partially my fault as I couldn't show up for two weeks, however, I still could have done the work. Otherwise, everything was great.

One thing that was very surprising was the chemistry the group had in such a short time. We didn't know each other very well but we were already making jokes and having good laughs around the team and very much bonding.

One thing that I learnt about groups is that it is good to take chances on people. What I mean by this is that you shouldn't always stick to friends for groups and that you should bring people from outside of your friends circle into the group which we did and it worked very well.



MELISSA

The group worked really well together. One thing that really stood out to me is that every team member was so supportive of each other. Everyone's opinions was valid and no one was shot down for coming up with ideas and suggestions.

If I was to do this project again, one thing I would do is start earlier. We had some members miss tutorials and rather than starting and assigning work, we waited until all members were together.

I am very proud of the team and how quickly we got the assignment done.

I took on a leadership role to get the assignment completed and could have been seen as bossy and demanding but it surprised me how well the team reacted – they just got the work done without complaining.

Working with groups can be difficult and many assumptions is that you will always get some strong members and poor performers however this was not the case at all with our group.

This is one thing I learnt – don't listen to all the assumptions about groups. You can get a great group who are respectful, patient and hard-working.



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Group Reflection

CALEB

When we were all together, we worked extremely efficiently and hard. We worked well as a team and were compatible with each other. We had good management skills and very good communication.

We could improve by sharing the workload a bit differently, with some people doing more work than others simply based on what they were told to do. Additionally, if we had group members turn up to every session we would have completed the task substantially faster. We would have worked a lot more efficiently sooner rather than later into the assignment. We could also improve by utilising the tools given to us a bit more, for example, using Github more to share files.

A surprising thing I encountered was when I found that when we all set up as a group around a table, we managed to blast through a surprising amount of work together, as we worked hard with little distraction. We managed to accomplish a lot in a small time.

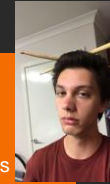
I learned that no matter how good your management is, personal things will always get in the way and inhibit progress. We had a very effective management of tasks but personal lives were in the way of it near the end, such as mine, where my completion of tasks was delayed due to personal reasons, no matter how well we planned for it.



PETER

After a bit of time we cohesively came together as a team and were able to do the work that we had delegated amongst each other. Our ideas and personalities mixed well with each other and thus we had a mostly successful experience as a team. We should have been working with the same attitude and focus the whole way through, instead of just in the final lead up to the submission date. Ideally, everyone should have been attending the tutorials that we are meant to so that we could work as a team every week, but this only happened a few times. That being said, it wasn't that horrible at all and it could have been a lot worse.

I was surprised by how well we actually came together once we buckled down and started completing our assigned components. The group ended up having a certain cohesion that I was surprised to see after we begun with a lack of it. I have learned that you must plan, delegate, and get started early. This is how you minimise the amount of stress shared by the team. I also learned that everyone works differently, some gradually putting in work across a timeframe, while others complete it in large chunks every so often. A good team has to be able to adapt to how each other work, and should accommodate each other with each member also trying to adapt their own style to fit others needs.



YOUSEF

I love working as a group especially when having the right people on your team, ones that work equally well and are done with the assigned tasks on time. You get to have fun with others whilst working on your assigned tasks. This assignment went really well with all of us completely done with our tasks on time. However, our time tables differ and finding time to meet up and work on the assignment had to be worked at, but we still managed to find time where we all could meet up even if it wasn't the most desirable one. The website design wasn't surprising as I have seen Caleb's previous websites, and it's absolutely fantastic. And Melissa's leadership skills are to be praised too. Not that other members were of less use, each one of us did what they're supposed to do. We made use of GitHub, and used it to assign tasks the group members, and keep track of what has been done. It was a great group overall, with great collaboration.

