INTRODUCTION TO IT

ASSESSMENT 2

TEAM PROJECT

Energetic Imperials

STUDENTS

- Caroline Burt – S3861634
- Robert Roper – S3857893
- Geoffrey Lloyd – S3865267
- Thomas Rix – S3407958
- Rhean Doyle – S3575010
- Chloe Buzza – S3644620

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TEAM PROFILE

Team Name: Energetic Imperials

Personal Information

Caroline Burt

My name is Caroline, I was born in Adelaide, South Australia in March 1970. I have 3 older brothers who still reside in Adelaide along with my elderly parents. I know live in the Blue Mountains region of NSW after moving around to various towns in NSW due to husband's work. I have a lovely husband and 2 gorgeous children (who are no longer children – 20-year-old son and 17-year-old daughter – but they still need their Mum from time to time). My hobbies include walking my 2 fur babies (2 miniature dachshunds – black and tan), going 4wd with the family and friends and when the weather is a bit warmer we go out water-skiing at the gorgeous Lake Lyell which is not too far away from where we live. My student number is 3861634. My IT interest has come about from moving to my current role which I commenced in September 2019 as Technical Services Coordinator and the reason for studying this course to get more knowledge of the terms that all my IT colleagues use during our meetings. My IT experience is mainly on the use of software which I use continuously every day in my work environment and social life. Our team name is Energetic Imperials – meaning we are all Idealistic, Passionate and Energetic.

Robert Roper

My name is Rob, I was born in Ballarat, Victoria on the 12th of March 1990. I grew up there and attended Ballarat and Clarendon College where I completed year 12 in 2007. From then till now I have worked in a diverse range of jobs, from machine operating, working in bars and clubs and as a prison officer. I then moved to Melbourne in 2019 to live with my partner Siobhan. We now live in Brunswick West with our little border terrier puppy, Scout.

I am currently working as an Operations Manager for an equipment hire company and have recently started studying Information Technology online at RMIT.

Geoffrey Lloyd

My name is Geoffrey Lloyd my student number is s3865267 and I am a part of the energetic imperials and our moto best describe the team idealistic, passionate, and energetic. I currently work as a PM shift team leader for third party logistic company I have been around computers and electronics most of my life. I love to tinker with things and love to work out how things work. My hobbies are mostly of the creative background. I love to play games mostly hearthstone, I enjoy roleplaying games mostly enjoy playing dungeon and dragons and I enjoy working on my stories and when I can I work on it either in my head or on a notepad. My IT experience is not overly huge beside the fact of living around computers I started a course in game design and have worked with adobe photoshop, Excel, Microsoft word and EPIC. My IT interest mainly revolve around creating and numbers lately people ask me what I would do when once I get my IT degree I always answer the same and that is I don't have ambition to work for google or any big company like that my goal is to work for a company or build programs or IT programs that make an impact and help people as much as possible.

Thomas Rix

My name is Thomas, I was born in Sydney in 1990. My father's work in the mining industry took us from there to Central Queensland before settling in Brisbane. I am now back living in Sydney as a Shipbroker with my wife and our pug Ruby. My hobbies include playing golf, travelling and horse racing. Intro to IT is my last subject of my Bachelor of Business (Logistics and Supply Chain Management) at RMIT. My student number is 3407958. My interest in IT has stemmed from growing up at a similar pace to technological developments in the world. The intrigue that comes with learning a new piece of software or experiencing the newest piece of hardware has always been fascinating to me. In my current workplace I am always looking at how we can do things better or more efficiently through technology. My IT experience is limited to the day-to-day software I use for my work and in my personal life, however I am enjoying learning basic coding skills in this subject. For Assignment 2, our group name is Energetic Imperials.

Rhean Doyle

My Name is Rhean doyle – I was born and raised in Brisbane QLD by an Australian Caucasian family. I attended St Dympna's primary school and then St. Joseph's Nudgee college for high school. I have one brother and am part of a reasonably small family. My hobbies include but are not limited to – Gym, Rugby, Computer games and spending time with friends.

I have had a long-standing interest in all things IT – Starting with gaming as a child and extending into the infatuation of what IT systems can do on a professional basis. I find the ability to use technology in every day work to increase productivity and accuracy extremely interesting and hope to one day be the pioneer of my own system to achieve the same end result.

I hope to really thrive at RMIT and to have great success with the IT pathway.

Chloe Buzza

My name is Chloe, I was born in Narrogin, Western Australia in May 1994. I am from an Australian Caucasian family and have two older brothers. I was brought up with no religious beliefs and speak only English at home. My hobbies include playing hockey, exercising, spending time at the beach, renovating my home and watching sport. I am currently studying a Bachelor in Business majoring in Financial Planning through RMIT and my student number is 3644620. My interest in IT is limited to the skills I need for work, social media and discussions with my brother who is a computer programmer. My IT experience follows this trend and is limited to what I use for work, committees I am on and what my brother has shown and taught me. In Introduction to IT assignment 2, our team name is Energetic Imperials.

Meyer – Briggs Test Results

Chloe - ESTJ

Caroline - ESFJ-A

Robert - INTJ

Geoffrey - INFP

Thomas – ESTP

Rhean – INFP-T

Chloe's profile as an ESTJ shows her to be organised, loyal, a team player and hard working as well as a potential leader. These personality attributes will all be helpful in our team to work together and stay on track. However, she has noted a lack in IT experience so she may not be the best candidate for the team leader in this case. Chloe and Caroline tend to have similar profiles and should attempt to combine their skills. Caroline, being an ESFJ-A has good social skills which will help keep the team cohesion at a high level. Caroline also has efficient workload management and administrative skills, to go with Chloe's organisation skills, this will hopefully help the team progress well and meet targets for a timely submission.

Robert is an ideal addition to an IT group assignment such as this, being an INTJ means he is innovative with his ideas and eager to solve problems, this will be an asset for the coding within the assignment. His personality type also strives for improvement opportunities which may help our assignment reach a high standard. Robert and Geoffrey look like they are going to work well together as Robert is keen on improvement and Geoffrey, being an INFP is highly creative and imaginative. Geoff's creativity and imagination will help our webpage design and give it an individualised edge.

Geoff may need the help of Thomas's energy and Caroline's social skills as he has mentioned his communication and team skills may be his downfall. Being an ESTP Thomas is a thrill seeker and a peacekeeper; he may not find many thrills in this assignment however having a person who is willing to settle disagreements will be valuable to the team if a dispute should arise. Thomas's energy is welcomed to the group. Like Thomas, Rhean, being an INFP-T, is a mediator and is likely to both see the best in all group members and keep the peace. Like Geoff, Rhean might struggle with the communication side of group work as his results show him to be shy, however if all other group members provide him with a supportive environment his skills will be able to shine and create fantastic group results.

Learning Style Test Results

Chloe - Visual
Caroline - Visual
Robert - Tactile
Geoffrey - Auditory
Thomas - Auditory
Rhean – Visual

We all have different learning styles, Geoffrey and Thomas are auditory, Robert is tactile, and Chloe, Caroline and Rhean are visual. While working in the group we should be understanding of each members learning preference and attempt to explain what we are doing or what should be done in a way that suits auditory, tactile and visual learners. Having a diverse set of learning styles may assist in the production of our project ideas and web page.

Big 5 Personality Test Results

	Openness	Conscientiousness	Extroversion	Agreeableness	Neuroticism
Chloe	54%	85%	96%	67%	12.5%
Caroline	48%	77%	50%	77%	33%
Robert	60%	69%	44%	50%	54%
Geoffrey	Medium	Low	High	High	Low
Thomas	56%	65%	56%	58%	33%
Rhean	62.5%	40%	58%	71%	75%

In the Big 5 personality test all team members rate above 40% for extraversion and above 50% for agreeableness. A score of over 40% for extraversion will mean our communication levels will be high and scores of over 50% for agreeableness will mean we are able to interact well as a team and compromise to come to decisions. Chloe has scored 96% in extraversion and should attempt not to be too overbearing in group situations. We all rate relatively low in neuroticism which will mean team morale will remain relatively high, we should attempt to support Rhean as much as possible, as he has a higher score here. Both Chloe and Caroline have scored relatively low in openness indicating they may not be as creative, luckily this is a stronger asset for Robert, Geoffrey, Rhean and Thomas. Everyone has scored relatively high in conscientiousness, other than Rhean and Geoffrey, meaning that all members are determined and organised. Geoffrey and Rhean have acknowledged their need to work on their team interaction and this can and should be supported by all group members.

Ideal Jobs

Chloe – Senior Financial Planner
Caroline – Junior DevOps Programmer (Website Design)
Robert – Game Developer and Programmer
Geoffrey – Full Stack PHP Developer
Thomas – Emerging Technology Analyst
Rhean – Chief Information Officer

Chloe has been very realistic with her relationship to IT and has chosen an ideal job that is vastly different to all other group members, a Senior Financial Planner. Chloe will need to be proficient in her computer skills and some financial planning specific computer programs, such as XPLAN, however she will not need to do specific programming. The similarities Chloe's ideal job has to other group members ideal jobs are limited to, working on a computer for most of the day and having good communication and team skills. Chloe and Rhean's ideal jobs both involve them leading a team and will require efficient leadership skills.

Caroline (Junior DevOps Programmer), Robert (Game Developer and Programmer) and Geoffrey (Full Stack PHP Developer) have all chosen relatively similar jobs. In these jobs Caroline, Geoffrey and Robert will all developing programs and writing code to assist their chosen company advance in productivity and useability. Caroline will specifically be helping develop user friendly computer systems and apps for both staff and customers to help with the sales and marketing of makeup products for her company. Roberts role is different in that the company he works for will be contracted to write program and develop games for other companies to sell to consumers. Geoffrey will be working as a software engineer for a company developing next generation cloud-based products in a specific coding language called PHP.

Thomas and Rhean have also chosen similar ideal jobs, Thomas as an Emerging Technology Analyst for BHP and Rhean as a Chief Information Officer for Prestige Consulting Group Pty Ltd both involve them making decisions and reporting on the technology standpoint and future direction of their respective companies. Thomas's ideal job involves development and execution of research projects that analyse how his company is managing and progressing in emerging technology. Rhean's ideal job is more involved in the implementation and decision making on what technology will be used within the company going forward, the budgets for that technology and measuring the functionality of the technology.

TOOLS

Link to group website: https://energeticimperials.github.io/

GitHub Repository: https://github.com/EnergeticImperials/EnergeticImperials.github.io

What we have done:

To create our team website (Energetic Imperials), we have used a combination of communication tools, code editing tools and the canvas website. Visual Studio Code was used to edit the html file that runs our team webpage. Visual Studio Code is a free source-code editor made by Microsoft. We found this software very intuitive and simple to use. We used a HTML template from a site called “tooplate” (see references) which runs all the CSS and Java for the webpage. We then edited the HTML and removed sections that we did not want whilst adding our own information. We used GitHub to host our team repository so that all of us could access the files we used to create the webpage and report. To share files, we also used canvas. Canvas was helpful for file sharing and communication, however, our main communication tool that we used was a chat group we created on WhatsApp. This was extremely helpful as we could all stay in contact even if we were busy. Microsoft word was used to create this report which was then converted to a PDF file upon completion.

Reflection: How the audit trail on Git repository represent our groups work

The audit trail on our Git repository is not an accurate depiction of who contributed to which sections of this report. The Git repository commits and pull requests will mainly display the creation of the website and updating the word documents used to create this report. Most students in the group preferred to use canvas to share files so this was then transferred across by another team member. Most people found it easier using canvas as this could be done via a mobile device when on the go with other commitments. Therefore, the audit trail does not represent who contributed the most at all in this assessment.

INDUSTRY DATA

The following are the job titles for the members of the Energetic Imperials:

Caroline Burt – Junior DevOps Programmer (Website Design)
Chloe Buzza – Senior Financial Planner
Geoffrey Lloyd – Full Stack PHP Developer
Rhean Doyle – Chief Information Officer
Robert Roper – C++ Game Developer
Thomas Rix – Emerging Technology Analyst

Using industry data from Burning Glass from the period 24th March 2017 to 23rd March 2018 (Burning Glass Technologies, 2018), which showed 120,353 open job listings throughout the period, some of the group have chosen some in demand jobs while others have not chosen IT specific roles.

Of the Ideal jobs listed above, Caroline has chosen a job which made up approximately 0.15% of jobs advertised during the above period, however it the job title excludes Junior, then her desired position makes up about 1% of jobs advertised.

Chloe has chosen a position that while not IT specific would require a proficient IT skill to ensure she can use and stay up to date with the IT tools with the financial planning industry. According to Seek.com (Seek - Job Search, 2020) on 15th July 2020, there are currently 103,207 jobs advertised across all industries, with listings for Financial Planners making up approximately 0.36%.

Geoffrey's ideal job is as a Full Stack PHP Developer, is quite a niche role. According to the Burning Glass data, PHP Developers made up 0.35% of job listings within the period. However, if we include the "Full Stack" element as a broader job search, then the job listings almost double to 0.63% of the total.

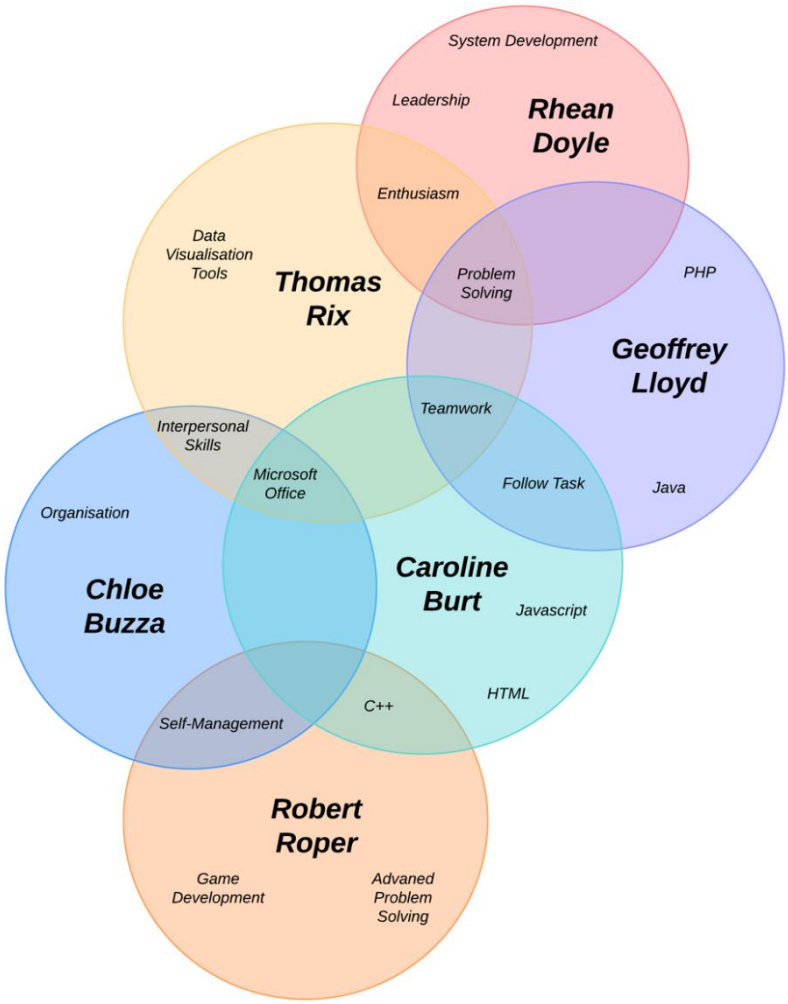
Chief Information Officer is a very senior role within an organisation, however Rhean plans to build the appropriate resume to get there. Given the seniority of the role, these positions only made up 0.09% of advertised roles according to the Burning Glass data. It is worth noting that if the search is expanded to include the role of Chief Technology Officer, then the job listings slightly increase to 0.13%.

Robert has chosen quite an exciting job as a C++ Game Developer, however this role only made up 0.07% of roles according to Burning Glass data. Searching deeper in the data, there was also no specific roles advertised for game development. If Robert could expand his skills to include Java development, this would certainly increase the number of jobs available. Including Java Developer into the search showed 0.76% of the total listings during the period.

Finally, Thomas has chosen a job as an Emerging Technology Analyst. While this job title is relatively new, the role of Business Analyst within the IT industry is not. During the period mentioned above, 0.30% of job listings were for Business Analysts. Again, if we include some more senior roles, then we see that percentage increase to 0.60% of job listings according to Burning Glass.

(Burning Glass Technologies, 2018)

Group's Required Skill Set



IT Skills	Rank	Job Listings	General Skills	Rank	Job Listings
Javascript	2	15,368	Communication	1	44,367
Java	4	12,228	Problem Solving	2	16,445
Microsoft Suite	14	6,033	Organisation	3	15,844
HTML	17	5,852	Teamwork	5	14,364
PHP	33	4,132	Leadership	11	5,144
C++	58	2,938	Interpersonal/Networking	22	2,473
Databases	75	2,309	Self-Management	24	1,984
Data Visualisation	140	1,439	Enthusiasm (Energetic)	33	1,011

(Burning Glass Technologies, 2018)

In both IT-specific and generic job skills, most of the ideal jobs within the group include many skills ranked within the top 25 of all job listings. This is especially true of the generic job skills where the ideal jobs of the group included 4 of the top 5 skills required.

The 3 highest ranked skills which were not in our group's required IT or Generic skill set were:

IT Skills	Rank	Job Listings	General Skills	Rank	Job Listings
SQL	1	17,570	Writing	4	15,590
Microsoft Windows	3	13,085	Troubleshooting	6	11,471
Microsoft C#	6	8,734	Planning	7	11,315

(Burning Glass Technologies, 2018)

While the above skills were not specifically listed, it could be said that many of them are assumed skills by employers looking to employ new staff. Even within IT-Specific skills, a working knowledge of Microsoft Windows could be assumed as a skill for most people.

Has your opinion of your ideal job changed?

Caroline Burt – Junior DevOps Programmer (Website Design)

After looking over the Burning Glass data I can see that the role I am interested in is a well rounded position if I choose to step up to the next level from a junior to a more senior role. As I feel starting as a junior would help with gaining experience I would think about stepping up to next stage.

I would need to further my study in the IT skills area to fill my role successfully. As for the general skills I currently use these skills in my current and pass roles and have no concerns with this area of the role and being about to take this on. Not sure if I would like to change to the website design role as I am extremely happy in my new role as I am doing the reporting that for the company which I feel confident doing.

Chloe Buzza – Senior Financial Planner

The burning glass data has highlighted to me that my baseline and IT specific skill set are in relatively high demand. I have good communication, problem solving and organisation skills which are the top three baseline skills sort after, and I have efficient Microsoft Windows skills which is the fourth most sort out IT Skill. I also have the ideal experience period which is three to five years in the current job. Despite not having an IT based job this makes me excited about my future in financial planning, I would not change my ideal job from a Senior Financial Planner.

Geoffrey Lloyd – Full Stack PHP Developer

After looking over burning glass data it shows that PHP may be a little specific and not in super high demand but is still needed, I then have to ask myself the question does this change my ideal job and to answer this honestly I would have to say it sort of does I am very innovative probably my best quality and love to come to the table with new ideas. I would love to harness that skill and flourish as I nature and improve it too better levels. I still want to work in the field of programming and a full

stack programmer at that, but I want to do something that changes lives and really means something. Something that I can enjoy and know I am making an impact.

Rhean Doyle – Chief Information Officer

The burning Glass data has reiterated my thoughts on the fact that the job that I see as my dream job really is one of a kind. In the same way it is a very prestigious role and would only be reached with determination, workplace networking and copious amounts of extra work hours along with natural talent for leadership and vision. Once I complete the IT degree through RMIT I will endeavour to move departments at work to begin my career in the IT field. After analysing the Burning Glass Data – I am willing to stick with my goal as Chief Information Officer – for the far future.

Robert Roper – C++ Game Developer

After looking at the burning glass data it highlights to me that my ideal job is extremely specific which I do not think is such a bad thing. The C++ Game developer is a long term, end goal for me and I am aware this will require a large skill set to obtain a job in this area. I will need to work in other areas such as Java Development or any other areas of coding/programming and build a portfolio so that I stand out when applying for these rare roles. I look forward to the challenge.

Thomas Rix – Emerging Technology Analyst

Having looked through the Burning Glass data and then the requisite skills required for my ideal job, I can happily say that my opinion of my ideal job has not changed. The required skills ideally suit my personality tests, while also being skills that I believe are attainable through study and learning on the job. It could be a little difficult to find a position given the 0.3% of job listings for this type of position, however given the right skills and persistence I believe my ideal job could become a reality.

IT WORK

Interview conducted on Friday 3rd July at 11.00am with Daniel – Technical Services Manager.

Daniel's title is Technical Services Manager, and his role is to ensure availability, support and security of all the IT and phone systems.

Daniel works in the Private Health insurance – Highly regulated and challenging low margin business. Other types of work Daniel is involved in is really anything that involves any electronic equipment and often in compliance.

Daniel interacts with all people across the business as he runs projects that will change things for everyone, they are sales, service, support, Marketing, finance and compliance people. Daniel's interactions with other IT professionals is part of his role as he runs the technology team directly and support the digital/web team, they are DBAs, Support officers, Digital developers, and designers as well as project managers. He does not have much interaction with Members directly though he does respond to issues and feedback they raise through the Member services team.

Most of Daniel's time at work is spent dealing with problem solving – usually software related and automation trying to save time by automating mundane tasks while the most challenging aspects of his work is changing management as the pace never stops increasing.

Finally, Daniel shared an example of the work he does that best captures the essence of the IT industry which is the short version: Problem – Find Solution – Install/Execute – Test – Test again – Finally Implement – and keep repeating until your meeting or assisting in the business strategy.

IT TECHNOLOGIES

Clouds, services, servers

What does it do?

Cloud computing is the delivery of computing services – servers, storage, databases, networking, software, analytics and more – over the Internet ("the cloud"). Companies offering these computing are called cloud providers and typically charge for cloud computing services based on usage.

Whether you run apps that share photos with millions of mobile users or support critical business operations in your organisation, the cloud is a technology providing quick access to flexible and cost-effective IT resources. When it comes to cloud computing, you do not have to invest in hardware in advance or spend a lot of time managing it. You can access as many resources as you need almost immediately by paying only for what you use. Cloud computing provides an easy way to access servers, storage, databases, and a full range of application services over the interest. Cloud providers operate and manage the network-attached hardware needed for these application services, providing, and using the resources you need through a web application.

What is the likely impact?

Over the past two decades, the cloud computing model has change the way that most enterprise organisations manage their information technology systems and resources. In the pas a company that want to develop IT capabilities was required to establish its own on-premises IT infrastructure. That meant leasing a data centre, bearing the up-front capital costs of new computer equipment and developing in-house capabilities to develop and maintain applications. For many small and medium sized organisations, the massive technical and financial requirements of building and maintain IT infrastructure were cost-prohibitive.

Cloud computing has created the opportunity for organisations to access the data storage and computing capabilities that they require, on an as-needed basis and with a significantly reduced up-front cost, instead of establishing their own on-premise IT infrastructure, a company can pay to rent cloud infrastructure and the related capabilities and components from a third-party cloud service provider such as Amazon Web Services (AWS), or Google Cloud Platform.

How will this affect you?

The cloud is a term we talk about in our lives today and is a part of just about everything we do.

Social media with Facebook, LinkedIn, Twitter, Instagram and Pinterest, there is a social media platform for everyone (15 million Australians are participating in one social network or another). All these social networks are cloud-based services and store user information in the cloud.

Entertainment for watching Netflix or YouTube, use Spotify to stream your music, or play games online, you are using the cloud.

Personal storage if you use Drobox or Google Drive to keep backups of documents or share work with colleagues, you are using the cloud services.

The cloud is having a major impact in our lives and online behaviours. For example, the cloud is pushing us to adopt every-more substantial internet connections. Cloud computing is also helping us to become more aware of security than ever because we are putting evermore personal information on there. Overall, however, the convenience that cloud services represent, and the ability for cloud services to fit with our increasingly mobile and active lifestyles (being able to access any of your cloud services on your phone, for example), makes the cloud an indispensable part of our modern lives.

Cybersecurity

What does it do?

Cyber security is how individuals and organisations reduce the risk of cyber-attack.

Cyber security's core function is to protect the devices we all use (smartphones, laptops, tablets, and computers), and the services we access – both online and at work – from theft or damage.

It is also about preventing unauthorised access to the vast amounts of personal information we store on these devices, and online.

Cyber security is important because smartphones, computers and the internet are now such a fundamental part of modern life, that is it's difficult to image how we'd function without them.

What is the likely impact?

While cyber security tactics are evolving, so are successful cyber-attacks which if successful can cause major damage to your business. Cyber security threats do not discriminate – all individuals and organisations that use networks are potential targets.

Lack of cyber security can impact on substantial financial loss arising from theft of corporate information, financial information (e.g. bank details or credit card details), theft of money, disruption of trading and loss of business or contract. Reputational damage and erode the trust your customers have for you which can lead to loss of customers, sales, and reduction in profits.

Data protection and privacy laws require you manage the security of all personal data you hold – whether on your staff or your customers. If this data is accidentally or deliberately compromised, and you have failed to deploy appropriate security measures, you may face fines and regulatory sanctions.

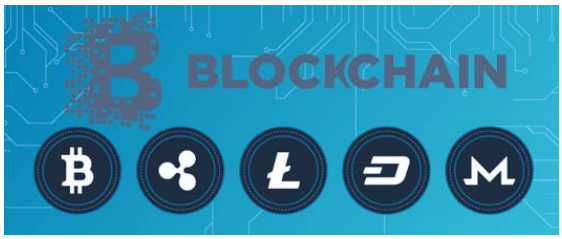
How will this affect you?

Let us face it; we live in a digital world using social media, emails etc. Identity theft is a hug issues, where hackers steal an individual's personal information and sell it for profit. This also puts the personal safety of an individual and his or her family at risk.

Our work lives, personal lives and finances have all begun gravitating toward the world of internet, mobile computing, and electronic media. Unfortunately, this widespread phenomenon makes us more vulnerable than ever to malicious attacks.

Cybersecurity keeps us safe from hackers, cyber criminals, and other agents of fraud.

Blockchain and cryptocurrencies



What does it do?

A blockchain is a decentralised database that chronologically and securely records transactions. Given its data is resistant to modification, blockchains in business are being explored in a variety of industries due to their high security performance.

Cryptocurrency is a digital currency where encryption techniques are used to regulate the generation of units and verify the transfer of funds, operating independently of a central bank. Bitcoin is one example of cryptocurrency. Cryptocurrency short-circuits the need for time-consuming administration logs of maintenance contracts and tasks.

What is the likely impact?

Blockchain technology has massive possibilities that will impact the future as we know it, and 80% of banking experts say that the blockchain technology will cause many changes in the next 20 years. Blockchain will change the way we handle and manage online transactions which will more than likely disrupt the banking and financial industry. Any transactions that are carried out through the blockchain system are much more secure and transparent.

Businesses would be prone to using the blockchain system because of its various benefits. These benefits include time and cost efficiency, timesaving (and time is money in business), privacy, security, fraud reduction, smart contracts, record keeping, and decentralization. Besides, blockchain storage costs can reduce the price of cloud computing up to 50%-100%. Why would a business avoid using blockchain technology?

How will this affect you?

The social impact of blockchain technology has already begun to be realised and this may just be the tip of the iceberg. Cryptocurrencies have already provided doubts over financial services through digital wallets, the rollout of ATMs and the provision of loans and payment systems. When considering

the fact that there are more than 2 billion people in the world today without a bank account, such shift is certainly a life changer and can only be a positive one.

Decentralizing away from governments and the control over people's lives will likely be embraced by many and the social implications can be quite significant. One only needs to consider the spate of identity thefts that have hit the news in recent years. Handing the control of identification to the people would certainly eliminate such events and allow people to reveal information with trust.

Taking it one step further, blockchain technology is well placed to remove the possibility of vote rigging and all the other negatives associated with the current process. In certain countries, we have heard of voters being intimidated or worse for polling stations that have been shut down by governments in an attempt to control the outcomes in a world where true democracy has been brought into question. Of course, with a new technology, there are new obstacles and problems that will come but the cycle goes on and those new problems will be solved with more sophisticated solutions.

Natural Language Processing (NLP) and chatterbots

What does it do?

NLP is a form of artificial intelligence (AI) that allows chatbots to understand and respond to the user's message. Artificial intelligence is the science of making machines and computers do tasks that require human intelligence. So NLP essentially falls into the ocean of AI and plays a super important role when it comes to building chatbots. Without NLP, chatbots wouldn't be able to differentiate between certain phrases. For example, we need NLP to help give context to the chatbot so that it understands the difference between "Hi" and "See ya."

What is the likely impact?

Chatbots have become highly imperative for businesses to gain recognition in today's competitive market. Brands can connect with their clients and interact with them in a personal way via chatbots. With the potential of chatbots to provide customer service like never before, brands are able to increase sales. As a result, chatbots can provide opportunities to improve brand engagement, help enterprises achieve business growth and make financial gains. Not only businesses but also customers are loving this technology. The hassles of waiting for long hours to get in touch with customers care executives get eliminated. Chatbots can provide answers to customers even during non-operational hours. Due to chatbot's prompt replies and 24/7 availability 69 percent of customers today prefer conversing with chatbots rather than humans, therefore chatbots have become a must have for business to survive. Cannot help highlighting the importance of NLP here.

How will this affect you?

We have all been there before, phoning up customer services with an urgent problem only to be greet with: "Thank you for waiting; we are currently experiencing an unusually high volume of calls." And we all know just how frustrating it can feel to be left hanging on the line.

With a customer services chatbot, this need never happen again. Unlike humans, chatbots cannot be overwhelmed by high call volumes. To these bots, handling multiple requests is a piece of cake – and they are available 24/7, seven days a week. Sounds better, right?

PROJECT IDEAS

Overview

Energetic imperials will be creating an app that assists people in a time of crisis. The app will help people stay connected to others, have professionals to discuss mental health challenges with and keep updated with changes in the current climate and news. At this stage, the app would be primarily based around support for those who have tested positive to COVID-19 with the opportunity to use it for other health issues and crisis's in the future. We chose this as our project due to the current climate people around the world are living in and our recognition of individuals struggling with the isolation associated with COVID-19.

Description

Our app will include the following features within different tabs in the app:

1. Access via a chat room or phone number to mental health professionals for help for those users who are struggling with the many different aspects involved with a crisis like COVID-19. Users will be able to turn notifications on for this section if they have chosen to message a health professional so they can see when they receive replies. Examples of the struggles that professionals may be able to help with include depression due to isolation and a such a large change in lifestyle, anxiety from the economic and social environment, abusive relationships from trapped environments etc.

2. A chatline where users can interact with other individuals who may also feel isolated due to a positive test or who are struggling with their symptoms or lack thereof. People will be able to chat to others in the same or similar situation as themselves, either as themselves or anonymously if they so choose. Hopefully, this chat system will allow users to talk about their experiences and troubles associated with COVID-19 and find people that are in similar situations to them to help each other feel supported and less isolated. This section will also allow for notifications to be turned on if a user wishes to know when another user has replied to them.

3. A section where people can upload handy tips and tricks to help others get through COVID-19 in a successful and positive way. This may be lists of essentials for a 14-day isolation period for those either testing positive or being in contact with COVID-19 or those returning from overseas. This section may also include lists of activities or projects that others have found enjoyable through their isolation periods.

4. A volunteer's section where those who are healthy and able to access goods and services and want to help those struggling can access and offer help and support. This may include things such as picking up essential supplies for people and dropping them to their houses or even doing game or puzzle swaps for people in isolation.

5. A government update and news section that includes the current COVID-19 restrictions that are in place within the user's area as well as any government updates, press releases and news updates for the current crisis. Notifications for this section may be turned on to allow people to have real time updates of the COVID-19 environment.

Tools, Skills and Technologies Required

In order to successfully make this app our team needs to have:

- Modern coding languages such as HTML5, Java, C++, Objective-C, Swift and or C#
- Skills in cloud infrastructure e.g. Microsoft Azure or Amazon Web Services
- Cross platform capabilities e.g. able to adapt to Android, iOS or Windows
- Skills in data engineering
- A way to make the app secure e.g. OAuth
- Good team cohesion including open and clear communication, clear goals and efficient leadership

Outcome

A successful outcome will be an app that helps those living in the current COVID-19 climate have a less isolated, less traumatic and information enriched experience. The success of the app will also see less people struggling with mental illness that originally predicted when we eventually get though the COVID-19 pandemic.

GROUP REFLECTION

The aspects that went well with this group is the fact that each person had a spot that they excelled in so if there was a part of the assessment that had what they excelled in they took the front line and tackled the task handing out more manageable tasks to the people who weren't as strong in those areas . It also meant that the person with the skills could offer advice if someone needed to take a task in that field so that the others are able to learn new skills themselves instead of only relying on the one person.

There is a few spots they probably could be improved one of the main issues faced is that due to everyone's lifestyle it was hard to get the whole group on the communication all at once so that meant at some points when tasks were handed out there were some delays in getting it done due to the fact that the person's lifestyle may have been interfering the other issues which again came to the fact of others lifestyles was the fact that some people were not able to take on as many tasks as they were not able to handle as much of the workload at the time.

One thing that was surprising was the communication one the group was pretty much on point and when there was any type of confusion there was communication on it and a solution for example there was a bit of confusion on who was doing what exactly in the fact that people were communicating it was just remembering who had what so a member of the team suggested the idea that we create a to do list so we could check who was doing what when we did forget.

The one thing that has been learned about groups is so much gets done and at a quicker pace when all team members are on the same page and as it was stated before the fact that not everybody has the same skill set or the same skill level it means that someone in the team is bound to have a skill similar or what is required for the task.

The GitHub log shows who is more in tune and can somewhat show the skill levels of each member be it multiple logs on the sane picture showing that the person may have had some issues or on the other aspect of it as mentioned the fact that a person doe have the skills of coding they may have tackled that front more so that the other members could work on the other tasks to help the team progress faster on what was at hand either way it is all a new learning experience that each of us have taken on board and have walked away with a great skill working effectively as a team.

Individual Reflections:

Thomas Rix

There is always hesitation when commencing a group assignment, whether it is your 1st or 21st. However, from the get-go, the Energetic Imperials were able to communicate better than any group I have been in during my studies. The very early setup of the WhatsApp group helped the team get to know each other a little before we really had to get working on the assignment. It was the early and effective communisation that had allowed us to effectively complete this assignment.

In terms of improvement, there were likely other technologies that could have been used to assist in better collaborating on the assignment document, such as Microsoft Teams or Google Docs. The thing that surprised me most, was the groups initial openness on their strengths and weaknesses. This allowed the group to more effectively complete the assignment to combined best ability of the group.

While I have worked in groups on numerous occasions, this group certainly did teach me a few things about effective communication. All groups communicate in some form, however the willingness to share and the openness of this group showed me that a task can be much more efficiently completed if each group member is open about their strengths and weaknesses.

I enjoyed this group assignment far more than any other before and am now looking forward to our next assignment together.

Rhean Doyle

Working in a group of strangers for an assignment can be relatively daunting – couple with the fact that everyone in a group may not have aligned opinions or ideas can generate less than poor end results. Fortunately for Group 19 this was not the case – We were able to effectively communicate and delegate work efficiently so that we could all get started on the assignment.

We used tools such as WhatsApp and Github pages to collate, communicate and share our work and ideas. When coming up with our project idea it was a matter of having a short discussion via Text Message to get all members to agree on what we would do. Each and every group member had their say of what they would like to do – which given the current global pandemic it was an obvious topic for us which is close to home for a few of our members. All members had various ideas of concepts to add to our project idea – this allowed us to have a great amount of information and input to successfully complete the assignment.

In summary – I personally believe that Group 19 was very proactive and each member took initiative to get this assignment completed – Some have done more work than others but this was not due to lack of contributions, rather than time constraints and other members being over eager – Which is always a fantastic problem to have in a group assignment! I am very happy with each and every person in this team and will endeavour to reach out to them in further studies.

Chloe Buzza

Group assignments at a university level are infamously hated, reasons for this usually include poor communication, an uneven split of work and an uneven ability or desired mark. This is enhanced in our case as this unit is being completed online which means we also have people completing the unit in different time zones which further complicates communication. In addition to these aspects Australia has been struggling with the COVID-19 pandemic which is affecting all our lives in one way or another. Despite the many complications involved with this group assignment I have been pleasantly surprised by how well we have worked together and how smoothly the assignment has gone. I have learnt that if everyone is completely open and free flowing with their communication, letting other team members what they are capable of both skill and time wise other team members are better able to fill gaps. That is communication and honesty are key.

Communication was open and clear via WhatsApp from the beginning and people put their hands up to do any job they were suited to throughout the assignment. The only reason for the workload percentage split in the assignment is that the people that completed more work got in first and did it before others were able to. I believe this may have been a floor in the way we worked as a team, we did not have an initial meeting to discuss who would complete which sections of the assignment and in what order. This should have been done to create an even work split. All members also need to improve their Github skills as our log may not be completely representative of work completed.

Caroline Burt

Research shows that by working together in small groups, students can develop critical thinking skills, exchange knowledge, share expertise, increase motivation and improve their attitudes towards learning. A team has a common purpose and a shared responsibility for success and having a team name is the first step to thinking as a team.

I feel that once our team had a name "Energetic Imperials" we started developing a group identity. Our communications have been through the WhatsApp and the whole team have contributed by assisting each other in workloads, answering any questions asked or assisting someone if they our having issues with any of the items required in this assessment.

Teamwork does not mean everyone does everything together, I feel that the team was well organised and broke the assessment down into components and then we sorted out who will do what according to our expertise, interest and availability. This helped with each team member focussing on our own task with the option of using the other team members when needed. That's teamwork, so when you need inspiration, expertise or support, we knew we can ask for it. We communicated with each other when a task was completed and asked for feedback, and if there was anything missing from that area. I have totally enjoyed working as a team and seeing what excellent work we have all put together and the way we have all assisted and supported each other through the whole assessment. The people in this team are all one in a million.

Robert Roper

Our group (Energetic Imperials) started off very well with excellent communication early in the assessment stage. This was done using a WhatsApp group and enabled us to all communicate amongst our busy lives. We all got to know each other and viewed each other's online profile from assessment one which was extremely helpful. From here we did well to determine where each other's strengths and weaknesses where and delegated tasks accordingly. Overall, I think we worked very well as a team and this was due to our good communication.

I guess the only improvement that I can think of is maybe using a different platform for file sharing, instead of using a combo of GitHub and Canvas to do this. Having one platform like Microsoft Teams could have streamlines this and eliminated any double handling.

One thing that surprised me is how much work everyone put in even though we are all working fulltime and have busy lives. I was concerned about people pulling their weight going into my first group assessment, but I am more than happy with how well everyone did to work as a team.

Geoffrey Lloyd

When we first were given the guidelines of the course material and notice that we would have to work in group after assignment 1 I was worried. Then it came to the time that we finally had to join a group I was anxious at first but told myself that I wanted this more than anything so I placed a comment on class discussion and got a reply from rob. Fast forward to now it's been a week, and everyone is amazing and supportive we all chip in and everyone tackles the parts they excel in making the team shine bright. The team acts as one and when not sure about something we put our heads together and problem solve the solution together and if someone knows the solution they walk the person through it and in the end we end up getting through in. The great thing about this team is that everyone has a field they are great at be it Rob with his motivation and leadership to

Chloe and Caroline with their report skills. There is a quote I think suites this team *Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it's the only thing that ever has.* – this was quoted by Margaret mead.

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