**IT Technologies**

**What does it do?**

Machine Learning is a subfield of Computer Science and Information Technology and it has thrived in recent years. Because many big companies like Apple, Google and Facebook are investing in, a lot of applications using Machine Learning have been created. Not only in technology but also in other aspects, such as physics, chemistry, medical and politics, this field has made a huge step for them. By using algorithms and given data, machines can self-learning and execute complicated tasks without manually programming every step. To be more specific, Machine Learning’s process is giving training data to a learning algorithm. Training data need humans to involve in before giving it to the model to learn. High-quality training data is very important because it just like a book for a “child” which is an algorithm to learn. Therefore, a complicated, accurate, adequate and irrelevant training data in the early stages will make the Machine Learning model generate valuable results. A learning algorithm can be comprehended as a brain of the system. It uses the provided training data to make a set of rules. Because of that, different training data and learning algorithms could generate different models. For example, the same type of learning algorithm can teach the system how to translate different languages. In addition, both processes of the Machine Learning model are crucial. They are influenced by each other. If the given training data is inaccurate or irrelevant, no matter how perfect the learning algorithm is it, it will cause a poor result. In the contrary, a substandard algorithm will miss information in given data.

Thanks to Big Data and Cloud, nowadays, Machine Learning can repeat and generate the system faster. It has a lot of applications that have been used around us. The closest one is in social networks and Email. Facebook cannot have enough laborers to serve 2.4 billion users a day with their rapidly up-to-date requirements. Machine Learning is a vital aspect that helps them to meet with demands of customers. One of the features is “People You May Know” which is guessing people that we familiar with. The ML has used algorithms to analyze our profile, list friends, address and other factors to calculate the possible results. Another feature is advertisements we might consider by classifying our interest and age. Furthermore, in medical, ML is combined with sensor to evaluate the health condition of patients in real-time which assist doctors easier diagnose illness.

Machine learning is a premise of Artificial Intelligence which is the future of humanity. Currently, the actual AI is still out of human technology. When we define an AI, it means a software, a mind, not hardware, a body. It should think and respond to events in daily like human. Hence, the final purpose of Machine Learning is constructing an excellent AI. For the closer purpose is making computers to have simple perceptions of humans. In the near future, a computer can become a powerful disability’s assistant that helps work more accessible for employees with disabilities. The Virtual Reality will be a new environment for them to work. Another application that can be real is language models. The translated system at the moment is just generates the base meaning of words that make some results useless with users. Because the system does not understand the situation of sentences. The algorithm for the language model will be developed so that it can understand deeper as humans do. In the near future, it might translate a book to a different language but still keep the original ideas of the author. Overall, Machine Learning changes our daily life, bring convenience and modern to every aspect.

**What is likely impact?**

The purpose of technology is to serve our demands. People always try to find a short way to do things so programmers and engineers will try their best to develop and create a more effective machine. The way Machine Learning impact to out life is becoming an assistant that always executes jobs as high accuracy. Our brain is a huge drive that can store 2.5 petabytes of data. However, we cannot remember lots of information at the same time. Therefore, the creation of AI has brought an “artificial secretary” to the world. For example, Google Assistant, Alexa and Siri are the first pioneers in smart virtual supporters. Moreover, some factories can change to industrial automation. It can reprogram industrial PCs and optimize the entire supply chains in the operation. By applying this development in all life aspects, there will be two biggest influences in society. The advantage is machines will take most of the tasks, users just need to order and wait for the service. For instance, the Internet of Things combines with the AI on the phone in order to control every electricity connection with private Wi-Fi by our voice which is called smart house. Moreover, factories can reduce manual labor by automatic chains. Nevertheless, we might depend on convenience too much and become lazy. A lot of workers will be unemployed because their jobs have been taken by machines. To sum up, everything has two sides but we need to keep evolving. Because of that, modern will always replace obsolescence to meet with the demand of customers. Instead of having thousands of workers, a group of 3 to 4 specialists with technical skills in Machine Learning can operate the whole chain.

**How will this affect you?**

As a programmer, we can easily accept this development without hesitation. If we have chosen IT as our path, we must determine to learn and approach new information. Technology is always developing, if an IT worker misses off the latest “update”, they will fall behind. Because of that, it plays an important role in my career. Machine Learning will rapidly grow in the near future and drag along the AI field, other aspects will also be developed to contribute to it. Thus, not only ML programmers are effective, but also other minors need to try to catch up. When AI has moved closer to perfect which is become an independent artificial brain, our life will be changed in many ways. Firstly, we will not need to concern about traffic issues. Most vehicles will be autonomous by ML that make the statistics of a traffic accident to dropdown. In some accidents, the reflection of human is not fast enough caused serious crashes. Thanks to accuracy calculation by algorithms, vehicles can impeccably operate without any support of users. Secondly, AI with IoT will change the way we live. A house with automatic electronic devices will be a dream of all of us when lightbulbs to AC can understand and self-control to satisfy our demand. Moreover, it can monitor the user’s health by measuring that are foods we eating good for us or have we drink enough water. In conclusion, ML to AI is a future of humanity, the better we know about it, the faster we grow.

**Reference**:

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**Description**

**Overview**

Our project is called the “RMIT student network”. This is a website that all RMIT students can access to form a team for assignments and work on with it as a group. The feature is showing students post as News Feed like Facebook. Moreover, each person will have their own biography, previous posts and credit point. Another feature is group space for discussion and setting up deadlines. Finally, each member in the group can give comments and evaluate by criteria to others. These feedbacks will affect to student’s profile and future collaborators will use it as a tool to estimate whether that member is appropriate to work with them or not. In addition, this website will provide RMIT students an opportunity to form a team with the same goal and exclude inactive people.

**Motivation**

There are two reasons that motivate us to do this project. Firstly, some students have a problem with gathering a team. RMIT has an international environment with not only teachers but also students from different countries. Although English is the primary language at a campus, outside class time, most of the students using their mother language. Hence, at the beginning of semester, some people find it difficult to communicate like introverts will be separated and must be formed with lazy people who are left behind by lectures. That will be a disadvantage for them. They need equipment to represent their personality and others aspects to classmates. Secondly, using the RMIT Society group to find a potential teammate is unduly challenging. There are many other kinds of topics in the RMIT group, such as accommodation, finding roommates, lost and found. Therefore, it is time-consuming to find the post we need. Moreover, not everyone uses Facebook or know about the group. Hence, it is unfair to that part of students. Overall, our project is inspired by understanding the unsolved issues of RMIT students.

**Description**

This website will be recommended and to all students by RMIT and lectures so that everybody can experience it. The front-end of the website will be simple with an appearance like other social media. It will have the search bar, other tasks like home, notification, profile button and a list of groups that students currently have with chatbox. When new students first use the website, it will have a short guide through all functions. Moreover, we will ask RMIT to hold a workshop for teaching people to use the RMIT student network. The website will have three mains part:

* The home section will show the post that relates to our major. At first contact, the website will ask students to choose the Schools they in which is SST, SBM, SCD and SEUP in order to present all the current articles related to their major. First of all, instead of posting “status” like other social networks, it will have a place to the public a request to form a group for coursework or events. Moreover, not only it displays individual post but also show the groups’ recruitment for finding other members. Secondly, the web has an announcement box to show their interaction like how many and who want to collaborate with them.
* The profile section will show the bio of user. For example, name, date-of-birth, some facts about them and their stories. Another part is the credit point and feedback from previous collaborators which will be a tool to evaluate students. However, new students can only choose teammates by their bio and each student has the same point at the start, 2000. This number will change positively or negatively depending on how they express themselves as a team.
* Group chat section will help all members in a group can work professionally. They can set up deadlines and show work processes by publishing tasks so that everyone in a group can see and support each other.

The main function of the RMIT student network is to create a credible and appropriate environment for students to engage in. Before posting a request, learners will be asked to choose what is their goal in the assignment so that the web can find results that close with the requirement. For example, a student aiming HD will be recommended another student who also has the same target. However, if a lazy person tries to choose HD or DI goal in order to be a parasite, the credit point and previous evaluation will be a tool to denounce their idleness in cooperation. Therefore, if they want to be admitted as an active and effective teammate, they need to try to have a good profile. Some students are trying to rush through the course and get the degree so they do not really care about the grade. In this situation, they can freely find a suitable partner which have the same mindset as them.

Each article will only have two buttons which are contact and enrolment. There will not have a comment section in another to oblige to interact. An announcement box will show invites from other group or a person who want to collaborate so that users can considerate the group they wants to work with.

In conclusion, the RMIT student network is an alternative method for students to form a team. It will be a comprehensive digital workplace for everyone.

**Tools and Technology**

It is a website so it such have both versions in computers and smartphones:

* Software: a website with the security of RMIT, an account will be the same as the Canvas. With the phone version, it can be an application so that it can perform better interaction.
* Hardware: All operate systems at the current can run it. Not require a high-tech to use the website.

**Skills**

* There is no special hardware needed to run this website.
* Need high experience in HTML, JavaScript, Machine Learning and Database.

**Outcome**

This is a project that we really want to bring it to operate and not only used by RMIT students but also other universities. Although it might be challenging with first-year students. We are trying all best to have a prototype. Our ambition is not money, we just want to see it can contribute to making RMIT better.

**Feedback**

**Quang:** I have some individual feedback for my teammates and myself:

* Firstly, I think I need to improve my planning and set up a timetable. Some of the time I had too many works at the same time so I was late my group deadline.
* About Đức, he is an experienced programmer so the way he solves the deadline is very effective, he knows how to separate it and also enthusiasm in supporting us.
* About Minh, he is very energetic. He engages in every work and does not afraid to ask when he needs. Because of that, we can easily help him when he needs it.
* About Vĩnh, he is a perfectionist like me so I understand how hard to try to make everything go on the trail is. That is why sometimes he quite fall behind with the team. However, he still tries his best to overcome.

**Group Reflections:**

**Quang**: At the moment, we have quite slow with what we expect from the beginning. We are trying to make a prototype but we only have a plan and basic knowledge about HTML. We will try to focus on it and assignment 3 right after week 9. The surprise that came in when we were doing our project is everyone understands more about the IT world, know deeper in some aspects like blockchains and cybersecurity. Not only we have learned the effective way to use and work with Github but we also try to learn and use markdown which is a very easy way to do HTML. The Github has contributed to use of a perfect online workplace by using branch. Everyone can work and comment on other works.