Individual Statement – Hoang Minh Le

1. Educational Background and Thinking

According to Jehng (1993), Engineering and Science are rigid compared to Arts due to the systematic structure of knowledge in the field and the certainty of reaching a solution to a problem. Putting my majors in the same bracket, Data Science and Computer Science, I can relate to the claims in that for both majors, there is a step by step procedure to find a definite answer to problems. The basic knowledge of data analysis and coding are emphasized in order to find a solution or to create a product that fits the client's requirement – that is often black and white, meaning that the knowledge is not loosely-defined.

For instance, during the research project, the team decided to create a survey and asked me to help with it, then analyse the result which have a clear process. The process is straightforward: it has a survey writing and sharing part where you decide what information you are interested in, how you phrase it (e.g. multiple or short answer question) and how you would like to share it; and an analysis part, were you have to clean the data and understand coding to visualise the result of the survey. The work is sequential where the questions asked can be determined whether they are biased or good, and the result contained in the dataset is absolute which aligns with my thinking-style.

In terms of social relation defined by Maton (2019), we could say Data Science downplays personal attributes as knowers, suggesting weak social relation, ER^-. The syntax of programming language, the statistical concepts are predefined, and it is the responsibility of the expert to understand them. On top of the need of understanding my field, I have to have an orderly thinking: it was important for me to understand the work of others in order to assess which phase the work was at, every day. Because of that kind of a linear thinking, I felt the urge of being in charge of team management and assured that everyone progress step by step in the research and analysis.

2. Project Contribution

As a consequence of my thinking, tasks that were unambiguous, such as data analysis, report formatting or scheduling meetings were done by myself. That may be because a hard field like mine, often emphasize on the application of models we learnt, while Arts has a more fluid thinking and Business has a mix of soft and applied domain knowledge (Paulsen, 1998). This sort of thinking was also visible in my teammates as they were less orderly thinking and they were led by their own experience or interest during the research.

This meant that searching for external data and creating survey were parts of my responsibility as I was the only one who have the data analysis background and programming skills for that. This task is, although has a typical order that normally executed, involved involves knowledge from an applied field like Computer Science. A survey has to follow a format in terms of number of questions, type of questions and how the question is asked. It then has to be shared to gather data and clean it. Cleaning the data is usually the most time consuming process where the expert needs to make slight changes in order to work with it and at the same time must not alter the dataset. This

latter step and the analysis part demand the most Data Science knowledge as coding graphs and understanding the visual charts are important to convey a message to the team. Therefore, it could not be executed the same way by other members of the team due to their educational background.

Also, unlike my teammates, I focused a lot on organised teamwork since I noticed everyone had different ideas on how to solve the research problem. They were open to a lot of suggestion but when it comes to merging the work together, they were lost. This is also understandable, as they studied Economics and Sociology, fields that require individual learning like writing report and essay, and they had less of an interdisciplinary team environment. In the contrary, a Data Scientist has to apply their tools in other fields like Biology or Finance, and because of my previous experience with interdisciplinary project, I recognised the lack of cohesive work in our group. Hence, I was able to contribute in managing people's work and connect them into one comprehensive result, just by facilitating discussion - like asking Ann how her work can be related to Chay's work - or raising possible problems that could contradict two members arguments.

However, I also had limitation I had to overcome. Sticking to my method could have harmed the team as I was quite rigid in how to work on the project and less open to ideas presented by my groupmates. Everyone in the team had a different angle to solve the brief but some of them did not make sense for me as they came from personal experience or claims from articles. I wanted to work with statistical analysis, but there was not much information around that, contrary, there were many good observations in literatures. Through academic papers, Chay and Ann were open to discuss new point of views and share opinions – behaviour close to their field of study – while I tried to stick with statistical summaries. Therefore, it was also necessary from my side to engage in literature reviews to complement the knowledge my team had on the brief. Reading also helped me thinking critically on the current situation of data privacy and be involved in discussion with the team, and support them with my ideas.

3. Project Problems

Although I considered my field of study to be ER$^-$, this interdisciplinary project forced me to adapt. A major limitation of my thinking was recognised while working with Ann who studies Sociology that holds a less naïve belief according to Paulsen (1998). Ann approached the research question on a social level and wanted to find out the differences between individualistic and collectivistic societies. She heavily relied on her cultural background, experience and articles which is the complete opposite of how I usually work. In my mind, I disagreed with this approach because her proposal was not a structured thinking, in my opinion, and finding result in individualistic or collectivistic society is uncertain.

I did not understand the connection of data privacy with collectivistic society, and Ann's explanation was vague – making me anxious about where her research was heading to. In my mind, personal experience is just a fraction of the actual truth, one data point in the large dataset, besides, as someone who has a linear approach to tasks and relies on previous steps to make the next move, I could not see the reason of why she was eager to research that area of the topic. I wanted her to approach the problem like I had been, but I also realised that it may be a bad idea to demand something she is uncomfortable with. Hence, I let her work in the way she wanted to and I worked in my way. Shortly, I felt stuck with my work as I could not find data to work with and was somewhat lost about

what I could do. Meanwhile, Ann was able to find interesting topics through literature review, and that's when I admitted that I have to be open-minded to a different method of work.

This project has no definite answer as I am used to, therefore, it is difficult to implement my way of thinking in this research. You can tackle the research from many angle, and talk about it in order to connect the dots together. I was unsure we could work together as I did not see a concrete plan to a goal, but my teammates had economics and social-science background and were more familiar with a less rigid strategy. So to succeed, I had to change a little bit on how I think.

I decided to help out Ann and the rest of the team by reading academic papers and report that I thought could complement the information our team had gathered. In doing so, the team started relying on me not only in providing analysis but in the end I was able to guide the team. Instead of using systematic approach on the research, I used my organised thinking method to manage the team. The team members had a good mindset toward the work but were often lost on how to write report as a group, prepare for presentation or lead discussion during meetings while I felt like my orderly way of thinking could tackle these challenges.

With this, the team complemented my short-comings and vice versa. Had I forced Ann to work as I ask, We could not have had a good teamwork. You could say, I had to put myself into a stronger social relation position and a weaker epistemic relation in order to deliver a decent result, and trust my group members' knowledge to find the necessary answers to our questions. They are way more flexible and broad-minded to ideas and different perspective and did not exclude different solutions.

This example, just proved to me that in an interdisciplinary project, adaptability is important, and that my current skills set can be applied into many situation, not only in my own study field. Others can conclude the same result as mine but from a different angle, and there can be no prescribed order to it as knowledge can be uncertain and flexible view of learning is necessary. As I conclusion, I have to remember that after graduating, there is a high chance that I have to collaborate with diverse group of people, and I need to be adjustable to what is required.

4. References

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