Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

Software Engineering Reflection Essay

Aislinn Addison-Smyth

Group 36 - IBM

Contents

Introduction

At the beginning of this semester, we were met with a new challenge, seven strangers coming together to work on an assigned software engineering project. Our client was the admirable Senior Data Scientist, Abhay Choudhary from IBM. We were assigned a Machine Learning project entitled, 'Regression/Classification Based Machine Learning/Deep Learning Model'. We chose, as a group, to produce a regression-based machine learning model using supervised learning methods. As a group we experienced ups and downs, we quickly realised the importance of communication and reliance on each other. I believe the quote from the infamous automobile manufacturer, Henry Ford, was a fantastic representation of our teams' progression, "Coming together is a beginning, staying together is progress, and working together is success".

Initially, I was very nervous to have to meet, work and rely on six other people I had never met prior. However, once my team and I were acquainted, I quickly realised we were all in the same boat, with the same worries.

Project Roles

Throughout the course of this project I adopted numerous roles, my main role being the communication representative.

Communication Lead

My main role within the team was adopting the role of communication lead. My duties were to keep consistent but appropriate communication between my team and the demonstrator, lecturer and most importantly, our client. As I have had exposure to multiple customer service-based roles, I have developed adequate soft skills, and see myself as fit for this role. Being the designated communication lead for my team came with its pressures, I had to remember that any email sent from my behalf represented the entirety of my group. Any email that was being sent I would send into our discord to get cleared from my other team members, this eliminated feelings of individuals being misrepresented or incorrect information being sent. I was surprised by how much I enjoyed this role, I thought I would be quite nervous communicating with a Data Scientist from IBM, but I was excited to communicate with them!

Manager

As this was my second year taking part in the Software Engineering project module, I was able to compare being a project manager to being a software engineer. To my surprise I enjoyed this year a lot more, I am unsure whether it was because I already knew the layout of the module, therefore, it was not as daunting to me as it was initially. I thoroughly enjoyed being able to manage aspects of the project, from deadlines to helping our software engineers on the team I felt a lot more organised this year than I did last year.

Product Owner

I was extremely proud and content with our final product. Our client was extremely satisfied and wrote us a fantastic email congratulating us which was a huge relief. Although the project was stressful, seeing how content the client was with our work makes it feel like it was worthwhile.

Team Member

I felt a lot more engaged with my team this year and really felt like my contributions were recognised and voice was being heard. I believe our team was quite open-minded so whenever anybody had an idea or input to give, it was listened to and deliberated on.

Overall Experience

Overall, I had a very positive experience working in a collaborative team. My team and I had a diverse range of skills which proved a being very beneficial during the process of our project. Our project required a strong understanding and base knowledge of machine learning and regression models, which unfortunately, my team did not have. Despite our lack of knowledge int the area, I believe through collaborative work we were all able to give an educated input which helped us to ultimately reach our goal. It is so important in group work to get multiple opinions and to ask for help. I was assigned the validation for user input, however, began to struggle with the implementation, fortunately I asked one of my fellow teammates who was more familiar with ReactJS and could point out the errors within the code. Collaborative work is extremely important in developing individuals' soft skills, it forces people to e able to communicate their ideas and is a fundamental part of becoming a successful software engineer.

Individual Issues

Unfortunately, it is unrealistic to believe that there would no bumps in the progression of these types of projects, they all face their own challenges and difficulties, and this one was no different.

As I was the communication lead for the team, all emails sent to either the demonstrator, lecturer or client had to be cleared by myself, and ultimately, by the entire team. We had an instance of an email being sent to our client without the group's prior knowledge. This email contained a document titled, 'Project Proposal' and was sent in the early hours of a Sunday morning. The dilemma began when myself and my other team members read the email and realised that the supposed project proposal had not been agreed on prior. The document contained spelling errors, grammatical errors and information about choices made in the project that were not finalised. Although the email was not sent out of malice or harmful intent, it was unprofessional.

The management team came together to come up with the best solution to tackle this problem. We began by contacting our demonstrator for guidance on how to handle the situation with the client, as the client is our main priority. We were unsure whether to apologise and risk showing internal conflict within the group, to act as if this was in fact a collaborative project proposal or to try and send a new and improved document. We went on to have a discussion with our team member who sent the proposal to explain to them the issues and effects this action can have on us as a team. After discussions and advice from our demonstrator, our solution was to send our client our Requirements Document and in the subject line refer to this document as our formal project plan.

Although the situation was far from ideal, I believe this helped us as a team come together and collaborate, luckily, it was not at our suspense as our client appeared to be unphased by the original project proposal which was sent. As the situation happened quite early in the project, it pushed us as a team in the right direction in terms of communicating with each other and group work etiquette.

Individual Contributions

I am proud of the contributions I made to this group; I am most proud of the managerial aspect I took to this project. Without the contribution I made with the consistent communication between my team and any external individual, our organisation may have been poor. I also believe as well as bringing an important working style aspect to the team, I also believe I brought a very positive aspect to the team. It is very important to stay positive no matter the circumstance as soon as your mindset is negative that is when success is unattainable.

Self-Reflection

It is easy to look back on 12 weeks of work and forget the time and hard work which went into our final product. I realised many things about my won preferences and working styles. I prefer to be on the managerial side of things, I like communicating with people, organizing meetings calls and understanding a clients' want and need. I have also realised that I much prefer working on a project in a group setting, it is much easier to split workloads and assign work to individual people or subgroups. It also enables us to ask each other for help where needs be. I also realised that having consistent deadlines benefitted me, I suggested to the team that we make soft and hard deadlines, soft deadlines we would consider to be a day where you would try get designated work done for. Hard deadlines were a date which we had to have our designated work done by, both deadlines were set before a client meeting or before an actual college deadline to ensure if someone did not have the work done, we would assign it to someone else and get it sorted. I believe I have a much better self-awareness for what working styles I like and what I dislikes now than the self-awareness I had at the beginning of the module. Overall, I am thankful that we were given the opportunity to partake in a module like this one. It helped me to develop my software skills, managerial skills and communication skills.