Critical Reflective Analysis

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Chosen topic

Option 3, Looking back on your studies this semester and your work experience to date, write a critical reflective analysis that demonstrates how you have developed your ability to work as part of a technical project team and how you will apply this learning in the workplace moving forward.

Introduction

Looking back on my last two and a half years at Goldman Sachs, my rotation into my current team in Investment Banking has had the greatest impact in my reflections. My first team was a very small team which meant everyone would work individually on projects and therefore, I lacked a true teamwork environment. With my team rotation in August 2024, I moved into a larger team consisting of nearly 20 people with a greater focus on teamwork and coding excellence which creates a very technical environment which was challenging at first. Additionally, the second-year module, Software Engineering, also allowed me to experience and participate in a technical team, where we had to deliver a complex data analysis solution for use by my previous team. This module introduced me to what it is like working in a technical team especially with the direct possibility of impacting the efficiency of other engineers. These 2 scenarios link to the chosen topic and have allowed me to critically reflect.

Learning Experiences

Transitioning from my previous small, fast-paced data analytics team to a larger, global team which delivers solutions for front-office stakeholders has challenged many of my assumptions and working habits. In my previous position, the emphasis was on fast delivery where each member worked independently towards our common goal of making data analysis more efficient. While this environment required adaptability and agility, it also accustomed me to an individual contributor (IC) mindset in which I often prioritized speed over coding excellence. When joining my new team, I soon recognized a very different set of expectations needed of me. This team's deliverables directly impact global stakeholders, meaning that our solutions must be robust, thoroughly tested, and consistent with a multitude of requirements. Where my old team would build tools for its own use and iterate rapidly if something went wrong, my new team focuses on coding excellence, strict testing protocols and best-practice DevOps cycles, all of which result in a slower, yet much needed, pace of delivery. This shift initially felt counter-intuitive, and when I tried to apply my old methods through my IC mindset, I unintentionally introduced

bugs and found myself having to revisit and revise code much more frequently than I was used to improve the durability of the code.

Reflecting on this shift, I have come to appreciate how teams work effectively to produce solutions that are robust and directly improves the efficiency of stakeholders (C11). In a larger team setting, collaboration is very important where multiple developers, each with specialized areas of expertise, must agree on coding standards and DevOps procedures to ensure that deliverables are not only completed on time, but also follows coding excellence. Early on, I learned the importance of adapting my developer style to align with the best practices that my team firmly upheld, particularly those relating to code reviews and strict testing procedures. At first, I viewed these processes as impediments to fast delivery, but upon reflection and with guidance from my mentor, I realized they are safeguards that ensure quality and consistency of complex solutions.

Using the Gibbs Reflective Cycle which is a six-stage reflective model, introduced to me during this module, I was able to critically evaluate this experience. Moving past the initial stage of description which is surrounding my rotation into my new team described above, is the stage of feelings where I acknowledge that I was scared that I could not prove myself as fast as I wanted to. This fear often made me return to my old IC mindset of pushing code out quickly. This would often lead to bugs and issues which made me embarrassed and disappointed. Considering stage three, upon evaluation I recognize that this fear of proving myself is to be expected when being placed in a new environment and that I should have stayed calm and followed the teams' best practices as I ended up in a bad cycle of rushing deliverables and subsequently fixing bugs. Stage four is analysis whereby looking at the theory of self-determination, people's motivations are based on the psychological needs of being competent, autonomous and relatedness which often results in people working harder to prove themselves (Ryan et al., 2000). In my context, especially within high-stakes teams, rushing to show you are competent can be both detrimental to the business but also yourself and your team if not in-line with team procedures. Stage five and six is conclusion and next steps. Moving forward, I plan to stay calm and ask for guidance on how to best integrate into a new team. Also, communicating with my peers would be beneficial in understanding the team's mindset which will allow me to understand how to adapt my style to foster greater technical efficiency for both my team and me. Following through on this will ensure my behavior changes to allow me to develop and grow in the professional environment.

During the academic year of 2023/24, I was part of a group project of four as part of the Software Engineering module delivering an analysis tool. One of the more significant challenges here was deciding what approach we would take. The tool would require "Python-like" input so I argued that the backend could be developed using Pythons eval method which would execute any input. However, my team had an opposing view of utilizing regex to prevent any code injection threats. I recognize that at the start, I became very defensive of my approach and took the mindset that my approach would be better as the project was within my team and I thought I knew best. Although their approach would reduce the threats of hacking, it would increase the complexity of the project and timeline which is what I was reluctant to accept. This situation emphasizes the importance

of understanding a wide range of technical concepts such as network threats to gain a broader understanding of the situation at hand.

Through the "What, So What, Now What", also introduced by this module, model I can analyze this situation. Firstly, for the “what” phase the disagreement was surrounding the best approach to take for the project. For the “So what” phase, I recognize that if I had communicated rather than take a defensive approach, we would have saved ourselves some time. This highlights the importance of communication in a team whilst also balancing opposing views and actively listening. For the “now what” phase, I plan to practice more active listening, especially at the start of a long-term project to ensure clarity as well as conducting more thorough research into the pros and cons of different approaches to be well acquainted with the intricacies of each to allow for clearer persuasion (C22).

As the project was part of my team, I took the role of leadership due to my domain expertise. Throughout the project we had to keep our stakeholders in the loop who did not all have technical experience. This meant that I had to plan for the meetings to ensure simple yet comprehensive deliveries of summaries, challenges and shifts in requirements (C19). Nearing completion, it was vital we kept the documentation of the tool up to date and thorough. This was challenging at first as we had to simplify 6 months of complex code into manageable chunks that would ensure ease of maintainability which in retrospect helped foster an ability to articulate complex points in a manageable manner (C18).

Another significant experience in the project was our first demo where stakeholders provided us with a lot of feedback including new and refined requirements. I recognize I initially felt frustrated and annoyed as we had to take a step back, but I ultimately understand that feedback is pivotal and vital to the success of a project to ensure it algins with a multitude of needs (C16). I also recognize that constructive criticism is not an attack on my abilities, but rather a steppingstone to a more optimum solution and fosters personal development (C23) and adaptability and flexibility which are important in the agile mindset (C28).

This project also emphasized the importance of collaboration. With my tasks focused on frontend and the team spread on backend, testing and report writing it was crucial to ensure everyone was clear on what they had to do and when it comes to integrating the code together from different people, how to best proceed. Collaborating not only allowed everyone to feel a level of ownership, but it also improved the quality of the final project and made everyone more efficient as we were all focused on one thing at a time only (C11). Through collaboration everyone had a stake in the project, so we felt accountable if something went wrong which fostered a strong bond between us.

Conclusion and next steps

Both the new team and group project provided significant learning opportunities allowing me to improve my communication, stress management and leadership skills. Rotating into a new team was tough but provided me with valuable insights into my psyche such as realizing my mindset of needing to prove myself immediately which in retrospect is not always beneficial. Instead, fostering communication is vital to better understand situations. As the group project leader, I also improved my delegation skills ensuring that each member was assigned to a task they were most knowledgeable of to ensure speed and quality of work.

Moving forward I'll strive to improve my communication abilities by thoroughly expressing my viewpoints and will actively listen in situations of disagreement rather than entering a defensive position. The group project also highlighted the benefit of a broader technical expertise so I will continue improving my skills in a multitude of domains such as networking and cybersecurity to provide me with a stronger knowledge base helping with project planning. These learning experiences will not only improve my ability to work cohesively within a technical team but also foster greater professional development.

References

Ryan et al., (2000). Self determination theory and the facilitation of intrinsic motivation, social development, and wellbeing. *American Psychologist,* 55(1), 68-78.