

**e-Portfolio:** <https://sam-tselapedi.github.io/CyberSecurity/rmppp.html>

## **Reflection Essay: Research Methods and Professional Practice**

### **Introduction**

Computer science and Information Security have been a great help to me in my professional life and personal life. It has given me the ability to think critically and solve problems quickly. I have also understood how high-performance computing works and how to use it effectively (Stark et al., 2019). The skills I have learnt in this subject will continue to be of great use to me in the future as I continue growing my skills and knowledge. Also, the theoretical knowledge I have gained will be essential if I ever decide to pursue further studies in this field.

### **Research Methods Process**

I have learned a lot about research methods during this module. Firstly, I have learned how to design research studies, gather data, and analyse them. This has been very useful in my professional life, as I am often required to do research for my job. I recently had to design a study to assess the impact of a new software development methodology on the company I am employed at. I also collected data from various sources, including surveys and interviews. I then analysed this data using statistical approaches and presented my findings to the management team. Secondly, I have also learned about the different statistical methods used to analyse information. I have found this very helpful in my personal life, as I am often interested in analysing data from various sources (Hassani 2017). For example, I recently used statistical methods to analyse the service level agreement data for logged service requests looking into calls that were closed within SLA

versus those that violated SLA to measure the IT department's key performance indicator(KPI). I could identify patterns and trends in the data that I would not have been able to see without the statistical methods I learned in this module. Finally, I have also learned about the ethical considerations that need to be considered when conducting research. This is important in my professional and personal life as it ensures that I ethically conduct myself.

### **Statistical Analysis Skills**

I have learned a lot about statistical analysis during this module. I have found my statistical analysis skills to be very helpful in my professional and personal life. Firstly, I have used my statistical analysis skills to help me with my job. I have found that my statistical analysis skills have helped me quickly understand and solve problems. I recently analysed an extensive data set to identify patterns and trends in service requests we receive in the IT department. I promptly recognised the patterns and trends in the data, and I presented my findings to the management team (Sootla et al., 2017). Secondly, I have also used my statistical analysis skills to help me in my personal life. I have found that my statistical analysis skills have helped me understand data from various sources. I have also learned how to use different software programs to analyse data. I have found that using multiple software programs has helped me quickly and efficiently analyse data. I have also found that using different software programs has helped me understand data from various sources. I can use Microsoft Excel to analyse data from datasets in the database. I usually employ statistics for information retrieval, picture evaluation, quantisation, cognitive computing, and networking and circulation simulation. Mastering various statistical methods qualities, which are the foundation of

computer science, requires a strong foundation in statistics (Stark et al., 2019). Documentation, recovery, processing, and presentation are the primary focuses of research scientists. Program creation for forecasting and process is successful is a standard job for them. Computer vision plays an essential role in data mining, which involves looking for correlations in large amounts of information in various fields, such as epidemiology and disease outbreak response.

### **Personal/Professional Experience**

My professional skills matrix has helped me understand my strengths and weaknesses and helped me identify areas that I need to improve. My professional skills matrix has enabled me to understand areas in that I need to develop myself and requires improvement. I realised that I am not very strong in research and data analysis. I have also found that I need to improve my development in writing and presentation. I can quickly and easily collect data from various sources and easily analyse this data. However, I found it challenging to develop and produce reports and presentations based on my findings (Hassani 2017). Secondly, my professional skills matrix has helped me to understand my strengths. I have found that I have improved my time management skills and have been efficient with time management. I have also found that I have developed and grown my organisational skills. I have created a plan to improve the areas of my weaknesses. I have bought access to research methods and a statistical analysis virtual course to strengthen my knowledge and skills before starting the research project module as a measure to improve the weakness I have identified about myself. I have also been writing about IT governance and policy documents for my organisation as an initiative to enhance my professional document writing skills. I chose those two areas since the is a

gap in the organisation because I realised that there are no governance and policy documents in the organisation. I have identified areas I need to improve through the professional skills matrix. I have found that I need to improve my project management skills. I have also found that I need to improve my interpersonal skills. I have been working on improving my project management skills by taking on more responsibility at work. I have also improved my interpersonal skills by attending networking events and interacting with more people.

My SWOT analysis has helped me understand the opportunities and threats I face in my career. I now understand the opportunities I encounter in my career. I discovered that there are many opportunities to improve my skills and knowledge. I can attend workshops and seminars to learn more about research and data analysis. I can also use books and articles to improve my writing and presentation skills. Through SWOT analysis, my understanding of the threats I face in my career is improved. I realised that there are many threats that I need to be aware of. The field of research and data analysis is constantly changing, and I need to be mindful of the possibility of not being able to keep up with the changes. I realised that it is essential to improve my skills and knowledge, continue to advance myself, and contribute positively to the advancement of society.

### **Conclusion**

In conclusion, the research methods and professional practice module helped me understand the significance of research for continued improvement for society's benefit of humankind. I have appreciated learning about the importance of ethics while doing research; I resonated with the fact that society should benefit from research than be

harmful by it. Improving my writing and presentation skills will be helpful for me to be able to contribute to the benefit of society through research.

### **References**

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