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To: Sandra Stark

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Computer Science Co-op Work Report

Non-Confidential

This summer (2017) my work placement was with Versaterm from May 1st to August 18th. Versaterm is a police technology company working with many police departments in Canada and the United States. Versaterm is dedicated towards providing technological tools to enable others to solve problems. Versaterm takes pride in keeping their products up to date with tech trends and standards. Versaterm also provides support to their clients for any assistance that might be needed. A couple of Versaterm’s products include the Computer Automated Dispatch, a system used to support dispatchers with organization of the information they receive and communication with police, fire departments and paramedics. The Records Management System (RMS) is a system used to manage, search and add data for police departments.

This summer I worked with the RMS under my supervisor Ali Ahmed. I was given a couple small tasks and one bigger task that would last most of my co-op. My task was to switch a rich text editor used in the system to a newer version. The next part was to add functionality to the editor to remove names from the text written inside the editor when printing. This meant adding an interface similar to Facebook for adding names using the ‘@’ symbol. The program is created in a language called Genero. The new editor I added used something called a web component which is an HTML page inside the program. This meant I was able to do most of my development in JavaScript, a language I feel very comfortable in using. The development process consisted of work intervals of 2-3 weeks before meeting with others to show what I’ve done and how I did it. On top of these meetings I would also work with Ali almost on a daily basis with any questions or concerns I may have had.

The development environment was very different from what I was used to using at school or at home. My workstation was a Windows 10 machine which I’m familiar with. The development environment however was a Linux file server accessed through a terminal emulator called PuTTY. This meant any coding was done in vim and navigating through directories as well as version control was all done through a command line which was all new to me. I felt that being able to keep my hands on the keyboard for everything was a much faster way to work. The version control I used was Apache Subversion. For programming languages as mentioned before, Versaterm uses a programming language called Genero. The syntax is similar to that of PL-SQL where rather than brackets, coding was done with start and end blocks such as “IF” and “END IF”. The database in my development environment was PostgreSQL. Since the clients of Versaterm don’t all use the same database, I did not have to learn much PostgreSQL specific information. All database calls are standard SQL commands to ensure each works on any of Versaterm’s Client’s environments.

During the summer I learned lots about the software development on a larger scale. The technical skills I learned mostly consisted of learning about Genero and using the terminal for development. The experience I value most is learning what it’s like to work on a bigger project. I thought HVK was a big project, but when compared to the RMS it seems as simple as writing “Hello World” on a web page. When working on a huge program like the RMS you quickly learn to appreciate simple things like standard formatting, standard variable names and simply, clean code. One thing that stuck from school that I tried to pay attention to in my code was making sure my code had low coupling. Since a part of my project was being developed by me from scratch I wanted to make sure if ever there were an error in my code that it could be easily isolated and fixed, but also that the fix wouldn’t mean fixing 10 other things in my code. In order to be sure of this I coded my methods to be specific with their functionality to help future developers. Keeping code quality high was more important than ever because of the project’s size. A bigger team working on a project also means more people could be inconvenienced by your errors. This last point haunted me every time I committed my code, thankfully I never broke anything. Despite my fear of breaking the build I also learned the advantage of working on a bigger team which is that there are many more people that can help you if you need it. I was lucky enough to have people around me who know the RMS well and were always more than happy to help me when I needed it.

I think I was very technically prepared for my co-op experience. The majority of the work I did was using JavaScript so technically I was very prepared for the work I did. The other work I did was using a new language however in school we learned php, Java, c#, JavaScript and PL-SQL so learning a new language was no problem. The highlight of my work experience was my first presentation which was in front of 4 people, one being the product owner**.** In this presentation I go to show off my work after about 4 weeks of work and they really liked it. Impressing them was extremely satisfactory. I think I could have been better prepared for this co-op by knowing a bit more about Linux and Linux commands. I also feel like I could have been better at presentations. I gave 3 presentations this summer and it’s an area that I think I can improve by doing more in school. The only way the work term could have been improved by Versaterm is by reducing the stress involved with the final presentations, although I understand their importance.

Overall I am very grateful to have worked for Versaterm. Learning as much as I did about their infrastructure, bigger projects and real world development came second to my enjoyment of a workplace where people enjoy coming into work every morning. I hope to return to Versaterm after graduation.