**CBSA Co-op Report**

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Confidentiality: N/A

## Summary

During this summer of 2017 I had the opportunity to work at for the government of Canada in the department called CBSA for a work term of 4 months starting May 1st and ending August 23rd. Within the work term I had two supervisors, Tracy Killins and Mathieu Lacroix.

## Employer Description

### **Mission**

The Canada Border Services Agency works to ensure Canada’s security and prosperity by managing the access of people and goods to and from Canada.

### **Products and Services**

CBSA has a wide variety of products and services available to the public and CBSA authorities. In general they have products and services to process travellers and commercial goods crossing through land borders, air travel and Coastal borders. The services the organization provides is fast processing through borders but maintaining a high level of security in order to keep Canadians safe from people or things that shouldn’t be entering our country.

## Position Description

This co-op I was assigned to the PIK Team, PIK is short for Primary Inspection Kiosk which is a new technology being added to many airports across Canada with the goal of replacing the old booths travellers would go to after a flight and answer questions. The new technology will be much faster than the old booths were and have the capability to do more, like scanning passports and comparing the passport picture to your face at the booth. My place in this project was as part of the maintenance side of things and some development of new pages for the web application that allows certain users to manipulate how the Primary Inspection Kiosk will function. Daily activities would consist of slight modifications to existing pages and the creation of new pages of the project.

## Technical Environment

During my time at CBSA the desktop which I had to work with was a 32 bit machine with an AMD processor and 4 gigabytes of ram. The operating system used was windows 7. The programming languages used by the organization for development is java for writing the application code and DB2 for writing database code and making connections to their various databases. The java language however, was much different then what we learned in school as it was enterprise java meaning they used java for their web service. Concerning the environment surrounding me during the co-op, it was very helpful as the office/cubicle was around co-workers who were working on the same systems as I was going to work on and as such was able to easily communicate with others. Made asking questions very comfortable and they were helpful answering questions or providing constructive criticism.

## Skills Used and Acquired

The computer science program taught me basics about making a web application which were very useful during my co-op work term. The concepts taught during the 4th semester were very useful as you would know how a web applications works and the multiple layers it works with. The job primarily used java as the language to code their programs and as such the basic java we learned in program were useful in the aspects of basic coding of solutions and etc… During this co-op a lot was learned as in heritage we learned how to make web applications through using C# in .NET but at CBSA they use java and there is a big difference in how things are coded and designed. This summer I learned how to make a web application using the java framework and the ins and outs of how one is coded and created. Another thing learned was seeing how many people from different backgrounds were needed to come together to create a functioning system that is reliable and robust. This co-op taught me many different techniques in how to make a system that can handle a large load of data coming in and out of a database without the cost of speed.

## Evaluation of Co-op Experience

The highlight of the co-op work term was being assigned my own project to create for the system. Unfortunately, the project ended up being given to a different section during the release proposal but having to the opportunity to work on the prototype allowed me to learn a lot and develop my skills. I was prepared for the co-op experience as the creation of happy valley kennels during the past semesters gave a good understanding of the life cycle of a system/project. For a programming job understanding this life cycle is key. Technically, it was very overwhelming at first as creating a web application in java is completely different then creating a web application in C# .NET. It took a week and a bit to grasp JavaEE6. The co-op work term would have been better if my account was created on the start date and not a week later.

## Conclusion

This co-op work term was good and interesting. I learned a lot more during this work term compared to last years. The only downside is that the process to get anything approved is very long, apart from that I would say I’m happy with how this work term worked out.