Co-Op Job Summary

Sentran\na
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Computer Science

a. Co-op Work Assignment

I worked as an engineering intern at Sentran from late June 2010 to early January 2011. The team has assigned a work prior to my arrival. My job was to implement mathematical model, deploying 3rd party resources to build a recommender system. The company is developing an iPhone and Web application which will be launched in mid January 2011.

There were three largely three projects that I worked on.

1. Recommender System Integration
   It was very nice to have relatively separate piece of the large project and develop it (starting from architecture, to implementation, debugging and documentation) independently with the guidance of a senior engineer. At the end of the term, I have finished implementing the recommender system, integrating it with database and implementing Windows Communication Foundations. It was a definitely worthwhile experience to build a project from the scratch. I get enough support and help to do the project and was interesting piece of the product so was glad to be involved in this process.

2. Feature Proposal
   While I was having lunch with the C.E.O of the company, I suggested a new feature that can improve the product that we are implementing. He agreed to the idea, and suggested me to make a business proposal. I did research about the idea in diverse perspective including psychology, marketing, human-computer interactions and mathematics, talked to people in different departments, and made a proposal. After a month or two, I made a presentation to most people in the company, gained feedbacks and modified my feature proposal based on it. Although it is not implemented as of yet, the team is working to make it real and it will be incorporated in the next next iteration of our product.

3. Data Analytics
   About a month before ending my term at Sentran, I have started to work on the data analytics, the way to organize the data captured from our product and how to present the data captured.

Partly because of my disposition toward product design, I did significant amount of work on non-technical sides. (Probably my work balance b/w tech and non-tech would be 50-50). Frankly, the amount of technical work was a little below my expectations. I gained valuable experience using techniques inside .NET environment and handled some database, but I didn’t enlarge much of technological expertise that I can use later. It was very meaningful to work in a real company for an extended period of time with amazing people. Also, the project I was involved was truly interesting and exciting- which makes my work much more enjoyable. Also, as a
relatively small company without firm program, you can shape your internship experience to an extent, which is also a plus. I strongly recommend internship at Sentrana.

b. Assessment of Learning and Development

This is a very liberal environment with diverse learning opportunities. Working in an office composed of around 20-30 people, you can easily see beyond the engineering circle. If you are an engineering student who has some interest in business or entrepreneurship, Sentrana can be an exciting opportunity to get some exposure to business, while working on engineering problem. Personally I was intrigued very much by the quantitative modeling team and their work. Composed of people with high degree in quantitative analysis such as mathematics and statistics, modeling team builds mathematical models that empower Sentrana’s software solutions. Not only able to see the software development cycle and get some technical approaches to it, Sentrana also let you to learn beyond the software development, its basis for success and business applications.

There were all hands meeting (where C.E.O of the company or some other person explains what the company has experienced since the last meeting and directs its future direction). Just being in such a meeting was very educational, and also you can learn a lot about leadership and entrepreneurship. Also you are invited to recruiting process frequently, which allows you to learn what kind of qualities that companies are looking for. There were several books given for the first week (ex. Pro C# 2010 and .NET 4 Platform, Design Pattern, and Refactoring) and several seminar sessions were offered. You can also purchase books and reimburse it if needed. There were several an-hour-long seminars (about once a month) offered by a team member on different techniques of C#.

c. Life Out-side of Co-op

Company has provided a very nice fully furnished apartment located at the heart of Washington D.C. area (near Dupont Circle). I was able to walk to the work (~30min), but also bus or metro was very accessible. This prime location of my housing allowed me to enjoy a lot of Washington D.C.

I enjoyed the city life very much, away from Ithaca. Washington D.C is a great city to be- with awesome free museums, nice zoo, theaters and performances, wide variety of good restaurants (from pricey one to street food), bars and exciting people. The city life was just so entertaining and exciting- I went to great museums such as Phillips Collection, National Gallery of Art and Newseum. Also there are plenty of places to go shopping- interesting local vintage shops, large malls reachable via metro, and Georgetown university area. Georgetown university area was in general very nice place to hang out. Washington D.C is a very transitive city- with many people working as Intern or just for few years.

Sentrana also offers social events fairly frequently; from July 4th party with fireworks, picnic, hockey, movies, happy hours and holiday party. Co-workers invited me to their party from time to time and I had a wonderful time there.
d. **Additional Information**
   
a. Vacations are not specified, but you can ask for it when needed.

b. Company has kitchen equipped with beverages, coffee machine and snacks. Also there is a ping pong table in the common area. There is a fitness center in the concourse level with basic facilities. (Though I haven't used it.)

c. There is a big Cornell alumni community and also Cornell center in Washington D.C area, and they have frequent events that you can join. (Also there are several Cornell alumni in the company)

d. The company is evolving very rapidly. My experience – or general atmosphere of the company changed from summer to winter. I think the experience of next co-ops will be slightly different from my experience, as company will change in the meantime again. It is exciting to be a part of a growing company.

e. As Sentrana is a relatively small company, it is likely not to have many fellow interns. Nonetheless, it is easy to get close to the coworkers - many young professionals.
Co-op Work Assignment

I worked on the Engineering Team at Sentrana, which was in the process of developing a consumer web-based application designed to match consumers to personalized restaurants and offers, custom chosen to meet their preferences. This was one of the two big projects that the Sentrana team was working on at the time, so many people in the office from all areas of expertise were collaborating to bring this application to market.

My first two weeks at Sentrana were very helpful in understanding the inner-workings of the company as well as preparing myself for upcoming technical projects. When any new employee joins the Sentrana team, they get to meet representatives from each of the different sub-teams so that they can learn more about how the different moving pieces of the company interact to deliver useful solutions. During this same timeframe, I was provided a description of what I would be working on and given readings to learn about the project as well as the languages and technology involved.

The first project that I was tasked with involved creating a sub-system that would track how users interacted with the consumer web application, using C#.NET, PL/pgSQL database scripting, and Microsoft Message Queuing. Then, upon completing this component, I would present the structure, progress, and journey to the senior management team, and integrate the development with the rest of the application. After this, I worked on smaller projects that utilized the same tools and coding languages. These projects included creating programs that would schedule and execute stored procedures at recurring intervals to populate database tables needed by the consumer user interface, as well as brainstorming, designing, and implementing a functional A/B testing framework.

I was assigned a mentor once I had arrived at Sentrana; as the Chief Technical Officer, he would describe the requirements of my tasks, field any questions that I had, and generally make sure that my stay in DC was going well. Furthermore, being in a very friendly, familial small-company environment, everyone at the office was very welcoming and open to help make the co-op experience the best that it could be.
Assessment of Learning and Development

One of Sentrana’s core values focuses on personal growth and development. Provided this, everyone at the company is very encouraging of helping interns and co-workers alike expand their breadth of knowledge (spanning an array of domains) and their depth of knowledge (becoming well-versed in a more specified group). Coming to Sentrana, I was very interested in broadening my horizons and learning more about the business applications of technical projects and how those business ventures are carried out. Being in an environment where everyone was incredibly supportive of sharing their knowledge, their decisions, and their projects with such a large degree of transparency was extremely rewarding. It was commonplace to be invited to meetings that were focused on quantitative modeling or client-facing, even though these were both outside of my discipline of expertise. I had the opportunity to attend anyways, since I was interested in these topics, and everyone at the company is very open to helping others advance their own intellectual pursuits.

A small company offers many positive attributes, including the ability to witness or interact with any level of the development process, be it high-level or low-level, technical or otherwise. Being able to personally interact with senior management, discussing, inquiring about, and even having a say in the high-level decisions being made was another very rewarding aspect of working at Sentrana.

Life Outside of Co-op

Sentrana was generous enough to both find and pay for housing in Washington DC for the undergraduate interns. Nonetheless, for any students looking to find apartments in Washington DC for a co-op term, there are many local universities that should offer sublets that are relatively inexpensive compared to many of the surrounding properties in the heart of the city. These would include George Washington University, which is just a few blocks from Sentrana’s office, Georgetown University, which can be reached by walking or by bus, and both American University and Catholic University, which are only a handful of metro stops away.

For transportation, there is a very accessible metro system, spanning from Maryland to Virginia, including two stops (on three of the five different transit lines) that are just a block away from the office. The metro service also offers cheap and convenient busses. I would typically take the metro to work in the morning and walk home in the evening, taking less than half-an-hour by foot and typically passing restaurants, convenience stores, and other shops along the way. Walking in the city is another easy way to get around, and is generally less seasonal than Ithaca since the weather stays
warmer for much longer. Even though I elected not to bring a car into the city, garage parking is also available directly next to the office and all across town. Many DC natives also strongly advocate biking.

In terms of the culture, the city has much to offer, especially in terms of diverse neighborhoods, a wide range of restaurants, and, of course, the many Smithsonian and other museums spanning many different areas of interest. Since we are in a big city, opportunities for social activities are limitless. Happy hour seems to be a very popular and emphasized event, more so in Washington than in other cities. The company will frequently go to happy hour after work, sometimes organized and other times spur-of-the-moment. Cornell alumni and travelling Cornell employees have also reached out to DC co-op students on occasion to meet for dinner. Over the summer especially, there are numerous Cornell students in the city for government internships, in addition to others enrolled in the Cornell in Washington program. All of these aside, there are still many other outlets to meet new people.

Evaluation

At the end of the term, I can say that I am incredibly pleased with having joined the Sentrana team. The opportunity to both design and implement a large-scale project that I could see being integrated into a commercial release was very satisfying. Moreover, being able to pursue depth of knowledge in engineering and breadth of knowing across other domains extending far beyond engineering has been an extremely rewarding experience. I would unquestionably suggest Sentrana to any prospective Co-op students looking to stimulate intellectual, professional, and personal growth in an enriching and encouraging environment.