Job Summary

A. Co-op Work Assignment

During the Fall 2012 coop term I worked for the company Autodesk in the Manchester, New Hampshire office. My working group specifically worked on the software called AutoCAD Civil 3D. This software is a vertical of Autodesk's primary product AutoCAD. I was initially coming to Autodesk to work a project that involved working with Autodesk's cloud and a technology called reality capture. However Autodesk acquired a company that already had this technology so there was no need to work on this project anymore.  

On the first day I went through a short orientation and I was introduced to my manager, James Paquette. For the first few days I looked through the AutoCAD Civil 3D manual book for me to get an idea of the software I was going to work with. After I received my computer I was assigned to my first project, which involved automated testing. Automated testing was a good way to start my internship because it allowed me to explore the software hands on. I was also introduced to a couple mentors who helped me when I ran into problems. They were all very friendly. At the end of this project I gave a presentation of what I accomplished to my manager and a couple of other co-workers.  

After my first project I was introduced to debugging some defects in AutoCAD Civil 3D. Through this debugging project I was able to go through the program's source code. Going through the source code made me realize how important it was to write clear and simple code. After fixing some defects for Civil 3D I was introduced to my second major project.  

My second major project involved mobile development, an area of software development that I was unfamiliar with, and agile development. To learn about mobile development or more specifically iOS development I watched lectures from Stanford University and I was given two books about iOS development and objective-c. In the month of November there was an event that Autodesk hosted called "Autodesk University", located in Las Vegas, Nevada. It was a place where new products were featured and where consumers learned to use Autodesk products.  

My team had to create a demo for this event, a demo where my manager can show the application, Civil WS, and its capabilities. Our team was able to successfully create a demo for Autodesk University and my manager was able to showcase this new upcoming product to consumers. Through this second project I also learned how important communication is in software development. For the application Civil WS our team used a software development kit, SDK, from a team in Israel. This meant we had to constantly communicate with the team in Israel because we needed to inform the Israel team of any defect or bugs we found in the SDK as well as informing them of any requests we had for the application. I really enjoyed
working on this project and was able to learn a lot through my mentor throughout this project.

**B. Assessment of Learning and Development**

The work I did at Autodesk was directly related to my educational background. As a student majoring in computer science, the projects I was involved in were a great match. They all involved the things I learned from school. As for career interest I think Autodesk allowed me to get a sense of what I will be doing in the future. Through this Co-op experience I learned that professional culture depends on the company. Autodesk’s culture was very laid back. We were able to dress casually to work and we did not have specific times in which we had to come in and leave. We were able to make our own work schedule as long as we got our work done. My position at Autodesk allowed me to develop my professional skills, as I was involved in presentations and daily scrum meetings with my team. Also it allowed me to broaden my understanding of software engineering. If I were to go through the same experience again, I would like to get to know more of my co-workers. All of the people I worked with were very intelligent and it was very interesting to hear what they had to say not only about work, but about life as well.

**C. Life Outside of Co-op**

Autodesk provided me with a housing subsidy and I was able to use craigslist to find housing in New Hampshire. I would recommend using craigslist because many places required leases and contracts for a minimum of at least a year. Also I recommend visiting and checking out the place before moving in. I made the mistake of moving in without asking if there was heat in the room during winter. Manchester does not have a good public transportation system so I would definitely recommend having a car. As for social activities if you make an effort to go out and meet people there will always be things to do.

**D. Evaluation**

The best features of the job would have to be the company’s culture and the experience I was able to get from the job. I think work experience is very important and it is something you can’t just learn from school. The experience I received from Autodesk was a valuable one. The culture was a great fit for me as well. Although the company has a laid back culture it did not take away from it being a professional environment.

I would say working in an environment with workers a lot older than me was the “worst” part of the job. Almost all of the employees had a trophy on their desk that said “10 year Autodesk” or “15 year Autodesk.” It would have been nice if there were another intern, but I understand there are fewer interns during the Fall. Although my co-workers were a lot older they were all very friendly and made me feel comfortable in the company.
Job Summary

A. Co-op Work Assignment

During the summer coop term I worked for the company Autodesk in the Waltham, Massachusetts office. I worked in the IPG group and was mainly involved with two Autodesk mobile applications, InfraWorks Mobile and KML Pipe Scanner. InfraWorks Mobile is an application that allows a user to view and edit project models and scenarios as well as collaborate with groups on the go. The KML Pipe Scanner is an application that uses augmented reality technology to display pipes.

Throughout the summer I had three main projects and they were all related to mobile development. The first project was related to augmented reality alignment. The goal of the project was to align an InfraWorks model to the real world on the iPad using the PointCloud SDK. The PointCloud SDK is a library that allows a person to use advanced computer vision technologies such as image recognition or SLAM map tracking. My task for this project was to test the PointCloud SDK and give feedback of what I thought of the library.

The second project that I worked on involved creating a separate InfraWorks Mobile Branded application. This application was to be a streamlined version of InfraWorks mobile and its purpose was to view specific InfraWorks models. To go about doing this project it involved a lot of code refactoring and reusing. Many times I had to determine whether a chunk of code was reusable and not. Also while doing this project I had a mentor who was overseas. I had to communicate with this mentor often and it was tricky sometimes because of the time difference. When I finished creating the application I wrote a test documentation for the QA developers, so they can test the application.

The third project that I worked on involved giving new functionality to an existing iOS application. The application I worked on was the KML Pipe Scanner. Previously this application supported .KML files because that was the file format the InfraWorks models exported into. However recently this changed and the InfraWorks models now export into .IMX files. I had to give the KML Pipe Scanner capabilities to read .IMX files. While doing this project I learned a couple of new skills such as using SQLite and OpenGL ES.

B. Assessment of Learning and Development

The work that I did during the summer was directly related to my educational background and career interests. I learned a lot about software engineering and mobile development while I was interning at Autodesk. Also in relation to the profession, I learned that the software development process is a changing process. Many software companies are changing and they are starting to use agile development instead of waterfall development. My position at Autodesk
allowed me to develop my professional skills through presentations and daily meetings with my manager. Also as mobile development is becoming more and more popular I think it was a very valuable skill to refine during the summer.

**C. Life Outside of Co-op**

Autodesk provided me with a housing subsidy and I was able to find housing through craigslist. I think it would be best to find housing near the company because Boston traffic is horrible. The best mode of transportation in Boston is the T, which is short for Boston’s metro system. However the T does not go to Waltham so the best way to get to the company would be by car. There are plenty of opportunities in Boston for social activities. The Boston area is full of college students, even during the summer, and it is easy to meet new people as long as you make the effort.

**D. Evaluation**

The best features of the job would have to be the company’s culture and the summer internship program of Autodesk. Compared to the fall coop term, Autodesk had more intern events throughout the summer. Some of the events Autodesk held for the interns included an ice cream social, baseball game at Fenway Park, and a barbeque.

The worst feature of the job was the commute back home because of the traffic in Boston.