Introduction
When we talk about how to use technology to make our learning process interesting and innovative, learning mobile app development is the best way to achieve this goal. As computer engineering students, we all hope to enhance our programming knowledge and skills. Perhaps you are still thinking how to apply our programming knowledge learned in our class to the daily life. I would like to suggest you to learn mobile app development to realize your ideas. In my stories, I am not just telling you what I have learned from mobile app development but also the way influenced me to learn more and more.

Make programming more fun
We never ignore the importance of programming. Nowadays, it seems that we cannot live without information technology, and programming is surely one of the essential parts of IT. It helps us to solve lots of problems in daily life even completely changes our lifestyle.

Learning programming does not mean that we only finish a programming course and then forget it. As engineering students, we should be able to
apply our knowledge to daily life. However, I have met many EE students that they feel programming is boring and only regard it as a thing to get a good grade in a course rather than using it to contribute our life. I think learning should not be limited to examinations, and learning programming is not exception. Actually, learning programming can be very interesting, meaningful and innovative. In the past half year, I have an experience of learning programming with fun—Mobile app development, which dramatically improve my programming skill with an innovative way.

My learning experience in mobile app development

EE2311- Java programming

We all EE students took a programming course-EE2311 in year 1, which help student to learn object-oriented programming in Java. In this course, I have learned the basic concept of object-oriented programming, Java syntax and some implementation of libraries. However, after this course, I thought the programming skills I learned in the course seemed nothing and out of practice. Then I tried to think about how to apply these skills into other areas.

Join Apps Lab –Workshop

In the last summer term, I joined the Android mobile app learning workshop held by CityU Apps Lab (CAL). I learnt the basic skills of android app development in the workshop. But more importantly, Apps Lab gives all members supports including technical support, tutorials, resource and opportunities to talk with successful people from the IT industry. It did not only inspire me how to apply our programming knowledge into mobile app development but also let me understand the present vision of the mobile app development industry. After that, I started to think about the idea and practiced the skills.
Android Game - Drag Plus

In EE2311 object-oriented programming course, I finished a course project that is a simple match-3 game design. However, this game is only available for desktop but not for other mobile platforms. I kept learning android app development in CAL workshop. Meanwhile, I started to create the android version of this match-3 game. I tried to learn some algorithms, game design pattern, implementation of game framework and multimedia APIs. Before I study in CityU, I studied multimedia design and worked as a graphic designer at both freelance and in-house bases. Fortunately, these skills can be fully applied into the mobile app development. We all know that designing a mobile app cannot only rely on the programming but also the UI experience, graphic design and creativity. Therefore, I created the original graphic elements for this Android game and introduced more functions. This android match-3 game is called Drag Plus. Finally, I got a rare chance to demonstrate this app in different events including the Apps Lab Opening Ceremony.
Apps Lab Opening Ceremony App

I am honored to contribute Apps Lab that I created the Apps Lab Opening ceremony mobile app. The app is designed for tablets and used in the ribbon cutting ceremony. The honorary guests Honorary Regina Ip, Honorary Charles Mok, Rotary Eugene Fong, Provost Prof. Arthur Ellis, Prof. Tommy Chow, put their palms on the screen of the tablets PCs, and it triggered the devices to display an animation. We witnessed the kick-off of CityU Apps Lab, and I so proud and excited to be the creator of the Opening Ceremony App.

Learning curve

There are different techniques you need to handle when you create mobile app. Programming skills, user interface, multimedia even the marketing skills are the factors you should consider. Engineering students may say that it is so difficult to create a mobile application by ourselves since we are not professional in other areas such as graphic design. Of course, everything is hard in the beginning. The proficiency, however, increase as in exponential growth. From my experience, when I tired to create my first android app, the program bugs made me frustrated, and the developing time is so long as I was unfamiliar with the APIs. After I did some prac-
tices, the proficiency increased as well as the efficiency. I spent more than 3 weeks to develop the android game Drag Plus, which I took a long time to familiar with the android game framework and did research on graphic design. After that, I only used one and half day to create the CAL Opening Ceremony App. It proves that our experience and productivity will increase with our learning and practices when we try to learn a new skill. Graphic design is not the engineering students’ professional but we can have motivation to learn the skills and knowledge. You should be brave to make the first step to learn more and deeper.

**Windows 8/Phone App**

Then I moved to learn other mobile application platforms. Windows app and Windows phone app look like they will be the trend for the near future. I joined CAL Windows phone app workshop to learn Windows 8/phone app development. I also join Windows 8/Phone App development campaign, which is a promotion from Microsoft to push new mobile apps on the Windows Store. Microsoft will give prizes to the developers if they publish the Windows 8/Phone Apps successfully.

I started to learn a new programming language C# and created 2 applications. One of them is
called WeatherMini, a weather app for Windows Phone platform, another one is a Windows 8
desktop calculator called JustCal. Through this project, I learned a new programming lan-
guage and how to apply online weather API into mobile application. Also, the CAL workshop
taught me some marketing skills when I publish mobile apps to the store, for example, how to
increase the download rate of your app. It was so amazing!

WeatherMini
www.windowsphone.com/en-us/stor
e/app/weathermini/fb1b83a9-3949-4
c88-9fde-c87d16668749

JustCal
http://apps.microsoft.com/windows/
zh-hk/app/justcal/14f0d925-74c1-40
b6-a61f-441bff191845
Old Hong Kong Photo Mobile APP

Now I am working on a project that is developing a mobile app of Old Hong Kong Photo (Oldhkphoto.com is an organization promoting collective memory and cultural identity of Hong Kong. It hopes that through new technology to promote these old photos, Internet users can gain more historic perspectives of Hong Kong. ) This project aims to develop an iPhone application to promote Old Hong Kong Photo. Through this mobile app, users have a convenient way to access Old Hong Kong Photo information and also enhance the interaction with Old Hong Kong Photo and other users.

This project is a CAL corporation project and the project scale is larger than my past projects. This mobile app will be launched for IOS platform, and the technical difficulty is relative higher as I need to consider back-end server technology. However, challenges make us stronger. It is a valuable opportunity for me to work with other organization. I learned how to present the idea to the client and organize the project plan. I keep learning and growing and hope the project will be successful.
I also focus on another project called CityU Live, which is a mobile app for all CityU students to share their life with friends in CityU. Students can take funny photos in CityU and share via this mobile app. It will become a mobile platform for all CityU students to share every rare moment of CityU. The mobile app is in progress and I hope it will be launched very soon.
From last summer term to present, I started from creating entertainment game, then designed the app for special event, participated the app development campaign and finally start a corporation project with other organization. At the beginning, I learned programming techniques and APIs followed by user experience, marketing skills and finally I could work with the client. The projects tend to be larger scale, and the skills applied in the projects are more professional and diverse. You see the benefit is not only improving my programming skills but also learning a skill-set to adapt to our future career.

After my sharing, you can understand what I have done and what I have gained through the whole experience. It is true that learning mobile app development makes our whole learning process interesting. It is not only an application of learning technology but also a new learning model to students. That’s why I would like to share why I am learning and studying at CityU is fun and exciting in I Like Tech@CityU. Now, it is your time to take action!
Reference

The photos taken in the workshops are referenced to the CityU Apps Lab Facebook page
www.facebook.com/CityuAppsLab

The photos of CAL Opening Ceremony are referenced to the CityU NewCentre

Photo on page 1 is referenced to Techwyse.com
http://www.techwyse.com/blog/mobile-marketing/5-things-you-need-to-know-before-developing-your-first-mobile-app/