

Design and Development of Android Software For the World Moon Project

Spring 2014

**CS4000: Individual Studies in Computer Science - Mobile
Software Design and Development**



This independent study I did under Dr. Lim has been an incredible learning experience. I had always been interested in developing on a mobile platform, especially Android, for a few years. When I heard about taking an independent study and that Dr. Lim had research in this area, I immediately went and asked him if I could do this with him. I did not have too much experience programming for Android when I started this study. I had taken apart an application and tried to develop my own but did not get very far. Dr. Lim pitched the idea of design a mobile application for the World Moon Project, and told me about what the project was and what the application needed to do. At first it sounded incredibly challenging, and I was not sure I could do it, but I agreed to it anyway since I like the idea of the project.

I began by doing some of the little, easier things, such as displaying text and using buttons. Then I went a little further and developed camera functions and got data to read from the sensors built into the phone. Then after learning how to do these things, and quite a bit of thinking, I came up with a way to calculate the angle of the moon relative to the Earth. I would have to say, surprisingly, the hardest part of the project was the user interface. It gave me a lot of trouble and took a while to get the hang of.

Once the project was complete, I had the opportunity to display the project at the Texas Tech Undergraduate Research Conference. Even though I was not able to attend the poster presentations, I feel like this was a very valuable and awesome experience.

Overall, I feel that this experience was invaluable to my education. This independent study pushed me to do something I had a great interest in, but was not confident enough to pursue on my own. I have gained a vast knowledge about Android programming and a new excitement to continue to work in this field and develop more applications.

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