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CS 421

NLP Project

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Watson Powered CS Class Companion Mobile App

Overview:

For our project, we created and Android application that uses a Watson API to help students pick their classes during the semester. The concept of the application, and its use is very simple. If I’m a computer science student at UIC, and I’m signing up for classes, this application will help with that process. It can show which classes are offered the following semester, who’s teaching those classes, and display a short description of those classes. This is functional with every computer science class available at UIC. With the APK we created, anyone with an Android device can use and access our technology.

Technical Specifications:

For our project, we chose to make the UI an Android application. We followed a tutorial posted on IBM-Bluemix’s Github page found here.

<https://github.com/IBM-Bluemix/chatbot-watson-android>

There were many issues with this tutorial, however, and we had to change a lot about the application to fit our needs. We had to configure the application to use our conversation services. After that we changed some of the functionality within some of the main activities. This was because of a deprecated threading implementation that the application was using. We had to update this, by updating the methodology in which the application makes calls to the conversation service.

Once this was working, however, the Android-native Watson API made calls to the conversation service and application updates very easy to implement. It made it so the application was more or less just a UI and a placeholder for all the Watson information. This made programming the application a very streamlined process.

The Watson conversation service backend was also very programmer friendly. In fact, for this portion, we didn’t have to code much at all. There were some specific functions that we needed to have some advance code for, but a large majority of the project was done using Watson’s online user interface. While it was easy to code and create this portion of the project, it was a much more tedious task than creating the Android application.

The reason it was so tedious to create this portion was because of the large scope of classes that are in the UIC CS program. This made it so the amount of entities in our system was over 48. Each of these entities itself had 3 different dialog functions. This made our dialog system very large. With such a large system, adding each individual entry was a huge task.

Future Implementations / Closing Thoughts:

This project was one of the more interesting things we’ve done at UIC. This is because it seems like people would use our Chatbot. We did not have time to fully implement all the functionality we were planning. Often with these school projects, ambition is not necessarily reality. If we had more time, we would have integrated a Retrieve and Rank or a Discovery Service to our application for added functionality. We could have also increased the scope of our project to not just computer science students, but all students at UIC.