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Final Project, CS21

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Project Proposal : Weather Application

I am interested in creating a weather application using Matlab for my final project. I would like to get some experience using APIs and this seems like a wonderful way to get experience. I have researched some APIs that will allow me to do so with a zip code, and I might also be able to do it with a city name and state. Some of the APIs that I have been looking at are Yahoo! Weather’s, Weather Underground’s, NOAA’s, and Forecast.io’s.

Once I have their location information I will fetch the data that I need from the internet and find a way to display it within a GUI. I plan to build this GUI using GUIDE although I’d like to start understanding how I would be able to code a GUI programmatically instead of using GUIDE. Within this GUI I will display not only current weather information, but also future weather information. The weather will be displayed in different forms: some as text, some as graphs, and some as images. I would like the layout to be aesthetically pleasing and intuitive for a Windows user. If I had the Matlab Compiler toolbox or the Matlab Builder for Java toolbox I would be able to export this as a .exe or .jar file and run it on any Windows computer or computer with Java installed.

I will probably be using the function urlread but I am sure that I will incorporate other new functions as I go along, some ones involving statistics in order to make the past graphs of the weather. I especially like the graphs of <http://weatherspark.com/>.

I might consider incorporating sounds, e.g. the sound of wind if it’s windy, but might not if it ends up seeming very corny and similar to those old obnoxious GeoCities and MySpace pages.

If I have extra time I would like to consider exporting the data from the weather app to simple text files or maybe even using the sendmail function. I really enjoy the coding so as long as I have time for it I would like to keep adding and adding until the deadline. But if you think this is too much to accomplish please tell me!