ECE Senior Design Weekly Report

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Team Name: Globetrotters Lab Section: TH

Week’s Task: Continue backend development with focus on expanding information beyond countries and incorporating photos to be used by GUI. Also, work on the project proposal.

Results:

MySQL

* Scripts to update existing rows with information in database table and adding new ones that don’t exist
* Restructure database to accommodate all locations (countires, cities, etc.)
* Issues with syntax errors due to Python formatting within MySQLdb library when executing UPDATE command

Retrieving Additional Information

* Decided to use wptools python library to extract information from areas that the user looks up
* Google Places API to find pictures of location in .jpg format
* Must save images onto the Raspberry Pi so that GUI can display it
* Google’s API has a limit of 1,000 calls per day and requires an API key
* Found a dump of information in text format about cities in all countries that could possibly be useful and is updated daily (however the file size is 1.2 GB)

Summary

This week I began writing scrips to automatically update existing rows in the database and settled on using wptools to find general information about cities. Right now, I can get this library working on a Windows platform but will need to find fix dependency issues for the RPi. There are some minor syntax issues with the MySQLdb python library that need to be fixed before the script is fully working. I’m also planning to restructure our database tables to accommodate all locations that the user looks up to avoid differentiating between the location type before recording it in the database. So instead of having separate tables for countries, cities, etc, we will have one shared table with general information about the location. For images, I have started looking into Google’s Photos API and plan to store the image on the RPi. Google’s API is free up to 1,000 calls per day and also takes in lat/long as input options in order to find photos of the location. Photos with a maximum width of 400 pixels only takes up 40 KB of space so storage shouldn’t be an issue.