ECE Senior Design Weekly Report

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Team Name: Globetrotters Lab Section: TH

Week’s Task: Continue backend development with APIs and database and start integrating software with other members.

Results:

Google and wptools

* Successfully download images from the web into a folder using Google’s Places API
* Images are user submitted
* Google’s Places API seems to be more focused on businesses rather than general information about cities, countries, etc.
* Google’s Geocode API is very reliable for finding the latitude and longitude of a city
* Wikipedia does not have a standard format for infoboxes, hard to parse
* Wptools requests for the entire page so the response time is longer

Teleport API

* More reliable responses than Wikipedia that are easier to parse
* Has consistent information in a standard format for the most common cities such as the full name, latitude and longitude, country name, continent name, timezone, etc.
* Does not require an API key to be used
* Also, includes images of urban locations that look more professional than user submitted ones

Summary

This week I focused more towards the APIs to pull information from. I found that some APIs were good in some aspects while others were not. For example, wptools is a great library for getting information from infoboxes, however the markup for Wikipedia pages are not standardized so actually pulling information from them is difficult and not very reliable. This means some locations will have all the keys we’re searching for, some of them, or none of them. Or a page might have the information we are looking for, but the key is different from the one we have (ex: ‘population\_total’ vs ‘population2’). I found that Google’s Geocode API and Places API work well together for getting images of a location. But if the search is for a country, then there is no latitude or longitude returned for that area. Teleport API is very reliable API which pulls its sources from GeoNames and IANA Time Zone Database. It does not require a key and a lot of the information about thousands of cities can be found on here in a standard format which makes it very easy to parse. However, it does not have more information specific to a certain location (area, elevation, etc), that Wikipedia would have. Building the database tables is still a work in progress but now that I have found more reliable information for many locations I can start to develop a database that is more structured than the previous one I had before. I’ve also started to integrate my work with other group members that are working on the voice control and GUI aspect of the application. All my code changes can be seen on our github under the khhang-api-1 branch.