ECE Senior Design Weekly Report

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Week’s Task: Start writing code to parse and compile information from API responses.

Results:

Information about API

Apixu

* <http://www.apixu.com/api.aspx>
* Returns data in JSON Format
* Detailed information about current weather with options up to 10 day forecasts
* Requires an API key and has a limited amount of free API calls

Wikipedia

* <https://en.wikipedia.org/w/api.php>
* Offers response in many different types of formats
* Has lots of detailed information, but is a little more difficult to parse
* API is free, do not need an API key to make requests

REST Countries

* <https://restcountries.eu/>
* Returns data in JSON Format
* Has general information about countries, has no information about cities besides country’s capital
* Does not require an API key

Programming Languages & Software

Python

* Has a lot of support and built-in libraries to use to make API calls and parse JSON
* Libraries use are requests, re, and wptools for making get requests, regular expressions, and parsing Wiki information.
* Comes preinstalled on Raspberry Pi

My SQL

* Database to store general information about locations
* Can interface with python: <https://dev.mysql.com/doc/connector-python/en/>

Summary

This week I spent a lot of time familiarizing myself with the Python language and also writing preliminary test code to see what kind of information I can pull from these APIs. Later on I want to combine this with speech-to-text. If possible, I would like to use fewer APIs to retrieve information if I can somehow parse similar data shared between two different APIs. I found that some information (population, size, elevation, etc) is difficult to parse for different pages because some labels exist and some do not for different areas. That changes the key values used to find that information for each page. So, for now I have resorted to using restcountries API for general information about countries as I explore other ways to obtain information from Wikipedia’s API.