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15-112 Term Project

**Competitive Analysis:**

1. <https://www.youtube.com/watch?v=iAGeiWCkAI8>

(My Road Trip: A 15-112 Term Project)

My Road Trip allows the user to input a series of locations. The user can also specify specific types of attractions: cultural, food, or entertainment. The program will provide specific types of attractions to the user within a specified radius and provide directions to those locations. A visual representation of the directions is also provided through the pygmaps module.

Pros: simple, easy-to-use UI, interesting idea – provide nearby tourist attractions – potential addition/improvement to base level project

Cons: Visual directions on the map do not precisely follow the roads – use Google Maps API (Javascript) instead of pygmaps

1. <http://www.mapquest.com>

Pros: embedded map that marks a location when you input it, after inputting city, it “remembers it,” (autofill) – include saving feature of locations one might frequently visit, search nearby feature that allows one to search for nearby stores (include feature: specify radius and search for particular stores nearby)

Cons: somewhat cluttered UI

1. Google Maps

Pros: UI is a scrollable map, has satellite, terrain views – might be a worthwhile addition to include a visual map that displays the locations user has inputted each time the user enters an address, autocomplete feature (don’t need to necessarily include that feature, but might want to include a saving feature that allows the user to save frequently used locations), use a text box like Google has to allow the user to just copy and paste an address rather than having to type it all in.

1. <http://www.solver.com/traveling-salesman-problem-visual-basic-and-evolutionary-solver> (demo showing how different TSP algorithms work)

Pros: include a time limit for algorithm (stop when no improvement is found after a specific time interval), overlay the educational demo comparing different TSP algorithms on a map containing the actual locations the user inputted, have the distances be scaled according to the actual distances between locations inputted by the user, shows incremental nature of algorithm (the way the algorithm works to find an optimal solution)

Cons: only a limited number of cities able to select from, does not account for road ways, not a practical application of the TSP algorithm (assumes a straight line path exists between any two cities)