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CS598 Report – Graph Visualization

General Idea

For our cs598 report, we have decided to make a web app using some existing libraries to visualize algorithms for graphs and curves that we have learned in class. Feature of our app include live animation of algorithms, custom data input to generate the curve and an explanation of each algorithm used. In our project, we do not make a graph theory library from scratch – rather, we utilize existing tools to create our app to visualize some definitions and algorithms we learned in class.

Motivation

A lot of things related to graphs are difficult to conceptualize until you work out an example by hand. When I watch the lecture videos, I have to pause every time a new topic is discussed to work out a concrete example, and apply whatever theorem or algorithm we just discussed. As a result, I usually take a day or two to catch up on the past week’s lectures. A lot of this time could be avoided with a program or an app that could do the visualization for me, so I decided to create one. This would help students learn about these algorithms, and also help non-graphing people become more interested in graphs with a fun visualization app.

(Can we bullshit more here?)

Implementation

(including pulling repo and running app)

We have implemented our web app using the Dracula javascript library.

**Insert implementation details**

Algorithm 1)

Explanation of algorithm

2) implementation details including pseudo code

3) Pics of algorithm working

4) Remarks

Algorithm 2)

Explanation of algorithm

2) implementation details including pseudo code

3) Pics of algorithm working

4) Remarks

Algorithm 3)

Explanation of algorithm

2) implementation details including pseudo code

3) Pics of algorithm working

4) Remarks

Limitations

(what worked, what didn’t work, what did we struggle on)

Conclusion

Future work

(Talk a bit about other algorithms and talk maybe about how we could work on them)

(Maybe mention some other javascript libraries as well)

Final Remarks