CPR/SE 491 Weekly Report **MAY 15-10 Week 8**

Advisors: Ruchi Chaudhary
Client: Gordon Burleigh
Members (roles): Ben -- Team leader
Cole -- Team Key Concept Holder
Ian -- webmaster
Paul -- communication leader

Project Title: Gene Tree Improvement Tool / TreeFix

Weekly Summary

Started to test original TreeFix code to determine if we can re-use the least common ancestor function in our implementation of the MulRF cost model. We also are trying to determine if the raxml is able to produce non-binary trees. In addition to working on the code, we also met this week as a group, and with our advisor as well to develop our design document, and make sure that all relevant sections were included, and each section was written with enough detail. After meeting as a group, and reviewing each part of the document, we sent a copy to our advisor for her to look it over before we submitted it.

Meeting notes:

9/22 Group Meeting with Advisors

Duration: *20 min* **Members Present:** *All*

Purpose and Goals:

Discussed and received feedback on our design document draft. Established goals for testing TreeFix's LCA and raxml functions. Our advisor also detailed some ways in which we could test our program ourselves, using simpler inputs to keep track of how our program runs through a certain test case. She also informed us that our client could supply us with test data as well.

9/24 Group Meeting

Duration: *45 min* **Members Present:** *All except Ben.*

Purpose and Goals:

Review weeks progress and to finish up the design document. The group looked over and reviewed each section in the design document, making sure that each section in the rubric was accounted for, and each had enough detail. After reviewing each section, we sent our design document to our advisor to look it over before we submitted it.

Pending issues

1. Test LCA - confirm that lca is compatible with the MulRF algorithm.
2. Test RAxML - confirm that users can input non-binary trees into raxml

Plans for next week

1. Create test plan for LCA and raxml functions. Come up with test cases as well as sample data that is simple enough for us to follow, and start debugging the TreeFix code. This will allow us to see how data flows through our program, and will provide a good look at what sections we need to retool. Also, testing

the raxml functions will give us a definitive answer as to how raxml deals with non-binary trees as inputs.

Individual Contributions(this week)

Ben Streit (1.5 hrs) worked on finishing up the design document

Cole Poffenberger (1.75 hrs) worked on the design document and examined the Lca function.

Ian Ray (3 hrs) put finishing touches on design doc, commented code, examined LCA function for output format.

Paul Leichty (2.5hrs) worked on the design document, started documenting methods relevant to MulRF in GitHub code, starting in the main function of Treefix.

Total contributions for the project

Ben Streit (20.25 hrs)

Cole Poffenberger (16.5 hrs)

Ian Ray (24 hrs)

Paul Leichty (17.5 hrs)