

Progress Report

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Goals:

1. Implement Bayesian Weighting Scheme on Toy Network. This was part of the larger project to compare different weighting schemes for interactomes. This implementation will later be used on a larger network with actual biological data.
2. Write up/formalise math behind another weighting scheme. This follows directly from the project idea as well. This will eventually lead to another implementation to use for comparison.
3. Read Papers about interactome weighting, directionality, gene function enrichment. This helps to find more interactomes and learn about their weighting schemes.
4. Find one application network to illustrate different weighting schemes. Finding a particular interactome to apply different weighting schemes will help ascertain how helpful the different schemes are based on existing biological knowledge of the actual signalling pathways and the interactome as a whole.

What Was Accomplished

1. Implemented Bayesian Weighting Scheme on Toy Network and posted to Graph Space.
2. Implemented a small portion of the scoring portion of the HIPPIE interactome
3. Read a few papers on HIPPIE interactome and Human Base.
4. Finished Bayesian Weighting Write Up - Posted to Blog.

Problems

1. The implementation was too slow and needs to be sped up in order to apply to bigger real-world networks.
2. Failed to fully understand Parameter Selection and obtain working knowledge of Logistic Regression for HIPPIE Interactome Paper

Next Steps

1. Change Bayesian Implementation to be faster
2. Follow up on Statistics resources to understand statistics concepts in HIPPIE Interactome but also come up with a list of descriptive statistics that might be useful to try to calculate for to compare weighting scheme implementations.

