April 30, 2015

Dominic: Future Direction

* Use of Bayesian Network approach to find the relationship between cliques found by Prayas
* Dominic talked about odds, Bayes factor.

**September 4, 2015:** BIBM Paper

Algortihm

* Work with only one subnetwork
* Start with a subnetwork
* Find the missing PPIs based on kernel values **greater than the average kernel values of existing PPIs(threshold)**
* Find the updated network by adding the missing PPIs
* Find the kernel values for the updated network
* Concern: 🡪 by repeated iteration, we might end up in a situation that the final network will have all possible PPIs. **My answer to this is NO.**
* Output-1:

Table-1: Existing and corresponding probable missing PPIs at different iterations

Network: Allergy\_and\_Asthma

|  |  |  |
| --- | --- | --- |
| Iteration | # Existing PPIS | # Probable Missing PPIs |
| 0 | 1245 | 1252 |
| 1 | 2677 | 179 |
| 2 | 2856 | 403 |
| 3 | 3259 | 118 |
| 4 | 3377 | 0 |

Subnetwork: Network\_500

|  |  |  |
| --- | --- | --- |
| Iteration | # Existing PPIS | # Probable Missing PPIs |
| 0 | 628 | 18 |
| 1 | 646 | 15 |
| 2 | 661 | 5 |
| 3 | 666 | 0 |
| 4 | 666 | 0 |

Subnetwork: Network\_600

|  |  |  |
| --- | --- | --- |
| Iteration | # Existing PPIS | # Probable Missing PPIs |
| 0 | 555 | 15 |
| 1 | 570 | 8 |
| 2 | 578 | 2 |
| 3 | 580 | 7 |
| 4 | 587 | 0 |

Subnetwork: Network\_700

|  |  |  |
| --- | --- | --- |
| Iteration | # Existing PPIS | # Probable Missing PPIs |
| 0 | 473 | 5 |
| 1 | 478 | 2 |
| 2 | 480 | 2 |
| 3 | 482 | 7 |
| 4 | 489 | 0 |

Subnetwork: Network\_800

|  |  |  |
| --- | --- | --- |
| Iteration | # Existing PPIS | # Probable Missing PPIs |
| 0 | 357 | 11 |
| 1 | 368 | 3 |
| 2 | 371 | 0 |
| 3 | 371 | 0 |
| 4 | 371 | 0 |

Subnetwork: Network\_900

|  |  |  |
| --- | --- | --- |
| Iteration | # Existing PPIS | # Probable Missing PPIs |
| 0 | 255 | 15 |
| 1 | 270 | 2 |
| 2 | 272 | 0 |
| 3 | 272 | 0 |
| 4 | 272 | 0 |

Subnetwork: Network\_950

|  |  |  |
| --- | --- | --- |
| Iteration | # Existing PPIS | # Probable Missing PPIs |
| 0 | 183 | 10 |
| 1 | 193 | 1 |
| 2 | 203 | 0 |
| 3 | 204 | 0 |
| 4 | 204 | 0 |