

바이오컴퓨팅 Assignment #5 Ontology

컴퓨터정보통신공학부 2016253072 명수환

1. The number of terms: How many terms does the BP ontology have? How many terms does the MF ontology have?

BP: 28484 MF: 11166

2. The root ID: What is the GO ID of the root term of the BP ontology? What is the GO ID of the root term of the MF ontology?

BP: GO:0008150, MF: GO:0003674

3. Find the errors such that relationships exist between BP and MF. How many relationships exist between any BP term and any MF term?

1043 errors

4. Find the cases such that two or more different types of relationships exist between two terms. Which pairs of terms have such cases?

GO:0000741 has two relationship - {'GO:0006997'}

GO:0019817 has two relationship - {'GO:0007031'}

GO:0031903 has two relationship - {'GO:0042579'}

GO:0099522 has two relationship - {'GO:0005829'}

GO:0099568 has two relationship - {'GO:0005737'}

GO:0099738 has two relationship - {'GO:0005938'}

GO:0106037 has two relationship - {'GO:0045179'}

GO:1905741 has two relationship - {'GO:0099533'}

5. The number of leaf terms: How many leaf nodes does the BP ontology have? How many leaf nodes does the MF ontology have?

BP : 13488, MF : 9153

6. The term depth distribution: Suppose the term depth is defined as the shortest path length from

the root to the term. Show the histogram of term depth distribution of the BP and MF ontologies, respectively (in Excel).

