

Tidygraph Algorithms

Search statistics (int)

- **bfs_parent()**
 -rank
 -before
 -after
 -dist
- **dfs_rank()**
 -rank_out
 -parent
 -dist

Search map (list)

- **map_bfs()**
- **map_bfs_back()**
- **map_dfs()**
- **map_dfs_back()**

(lgl, chr, int, dbl versions as well)

Example: Iron Mans closest enemy

```
> marvel_graph %>%
+   activate(edges) %>%
+   morph(to_subgraph, class == 'Ally') %>%
+   activate(nodes) %>%
+   mutate(friend_dist = bfs_dist(id == 'Iron_Man', mode = 'all')) %>%
+   unmorph() %>%
+   filter(id %in% Enemies[[which(id == 'Iron_Man')]]) %>%
+   arrange(friend_dist)
Subsetting by edges
# A tbl_graph: 25 nodes and 161 edges
#
# A bipartite multigraph with 2 components
#
# Node Data: 25 x 9 (active)
  id            characters  type Affiliation  Family  Allies  Enemies Appearance friend_dist
  <chr>         <chr>      <chr> <list>      <list> <list> <list> <list>      <int>
1   Winter_Soldier Winter Soldier Both  <chr [3]> <chr [1]> <chr [17]> <chr [14]> <chr [9]>      2
2         Loki      Loki      Both  <chr [2]> <chr [5]> <chr [9]> <chr [23]> <chr [11]>      2
3       Ant-Man     Ant-Man  Hero  <chr [2]> <chr [1]> <chr [6]> <chr [9]> <chr [6]>      2
4         List     List Villain <chr [2]> <chr [1]> <chr [9]> <chr [10]> <chr [3]>      2
5         Stern     Stern Villain <chr [2]> <chr [1]> <chr [1]> <chr [1]> <chr [2]>      2
6 Leviathan_(Creature) Leviathan (Creature) Villain <chr [1]> <chr [1]> <chr [1]> <chr [1]> <chr [6]>      3
# ... with 19 more rows
#
# Edge Data: 161 x 4
  from  to weight  class
  <int> <int> <dbl> <chr>
1     1   1     3 Affiliation
2     1   4     1 Affiliation
3     1  17     1 Affiliation
# ... with 158 more rows
```