



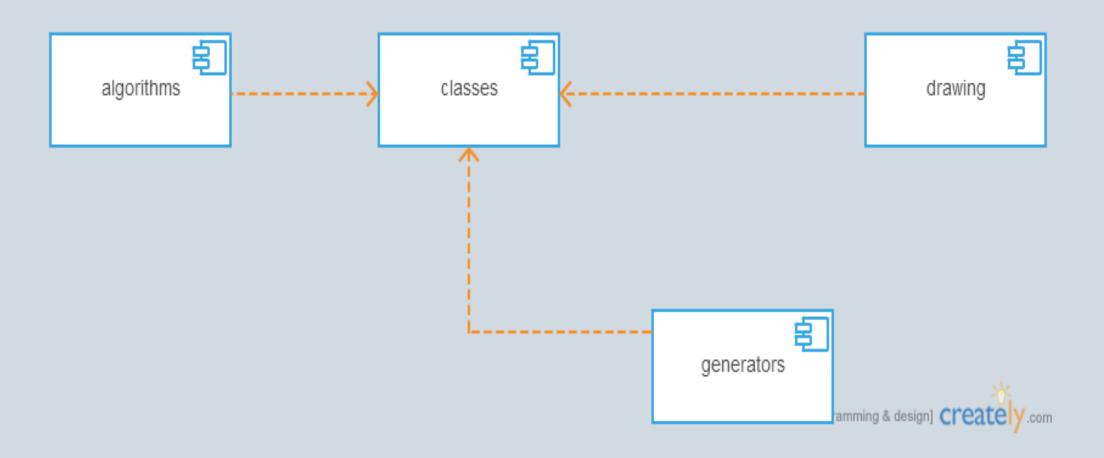
Advanced Topics In Software Engineering

NetworkX

IMPLEMENTATION TEAM: OVERRIDERS

- KONSTANTINOS KARAKATSANIS
- THODORIS SOTIROPOULOS

NetworkX Anatomy (I)



NetworkX Anatomy (II)

```
networkx
▼ 🛅 algorithms
   applications
   approximation
  ▼ <u>assortativity</u>
     ▼ 🗀 tests
           base_test.py
           htest_connectivity.py
           test_correlation.py
           test_mixing.py
           htest_neighbor_degree.py
           test_pairs.py
        init_.py
         connectivity.py
        a correlation.py
        mixing.py
        neighbor_degree.py
        pairs.py
   ▶ ipartite
    centrality
   ▶ coloring
   community
```

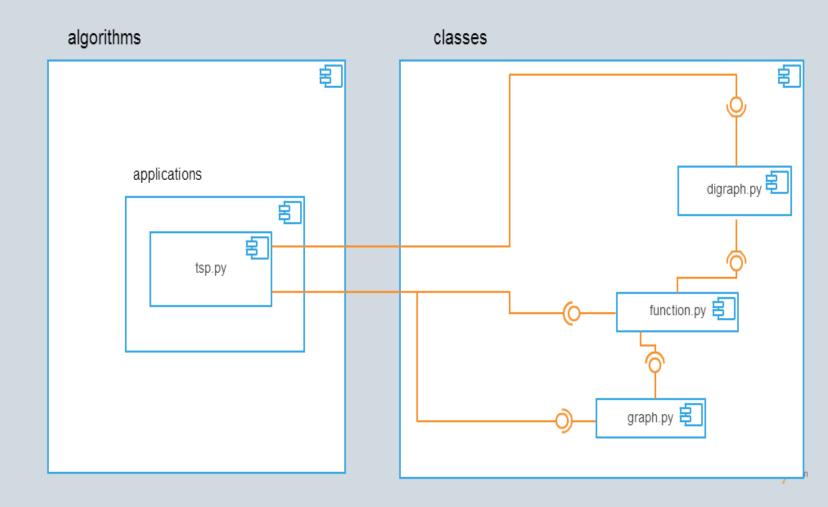
Combinatorial Optimization Problems (I)

TSP → NP-Hard

- Greedy
- Simulated Annealing
- Threshold Accepting
- Tabu Search
- Ant Colony Optimization

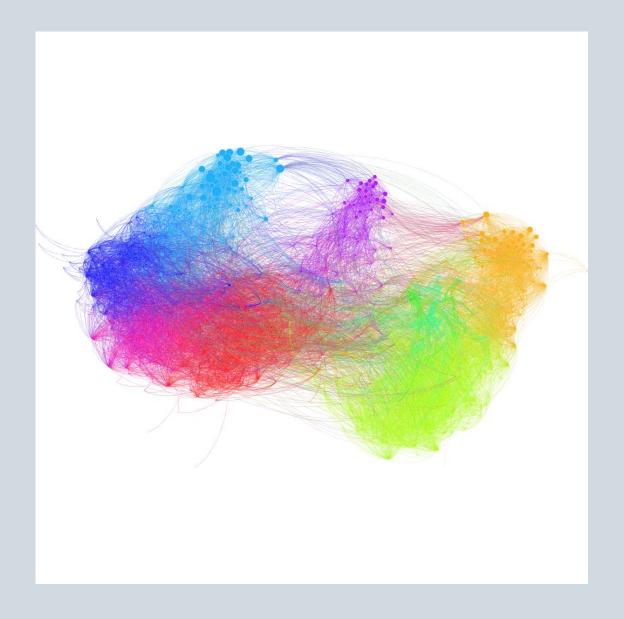


Combinatorial Optimization Problems (II)

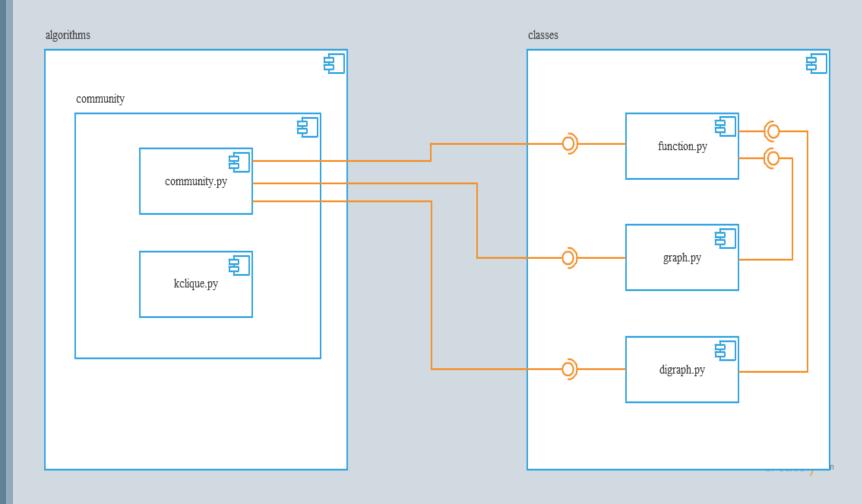


Community Detection (I)

- Girvan Newman
- Louvain
- InfoMAP

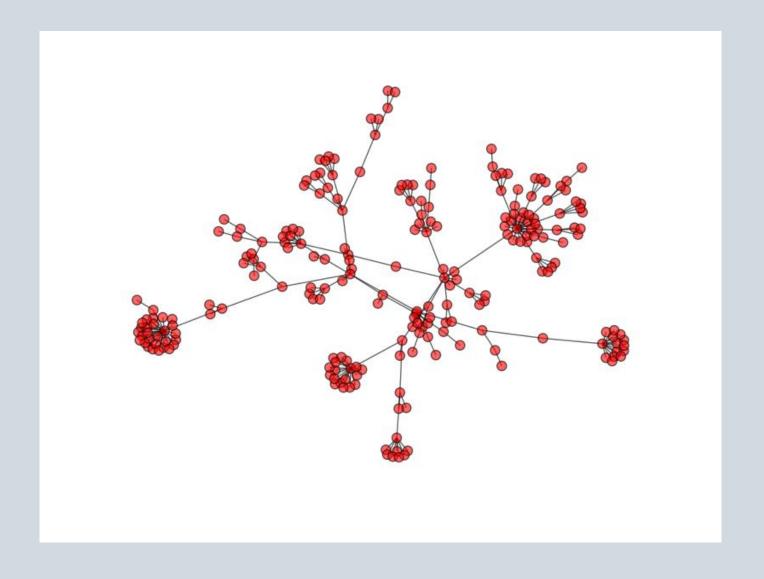


Community Detection (II)

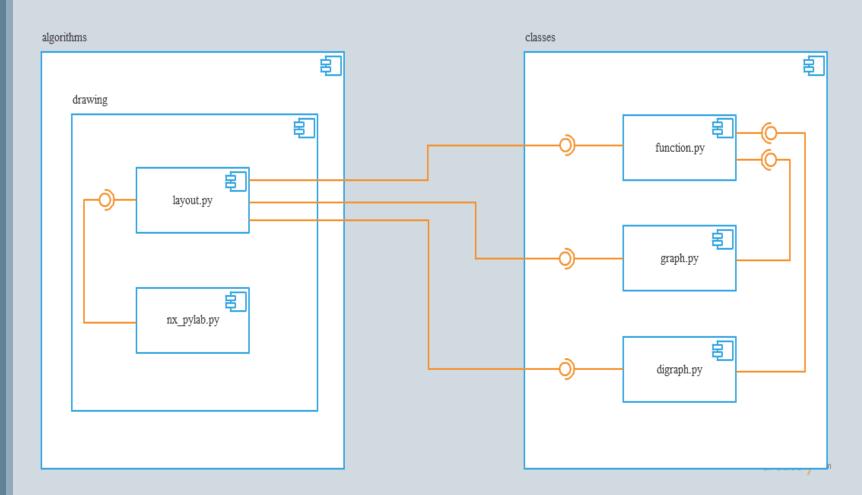


Force Directed Drawing (I)

- Kamada Kawai
- Harel Koren
- Tutte



Force Directed Drawing (II)



So far...(I)

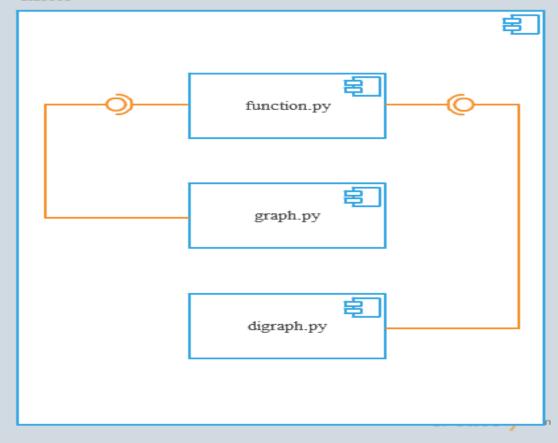
Checking weights

• Functions to test if a graph is weighted or negatively weighted.

Additions

- is_weighted()
- is_negatively_weighted()
- tests

classes



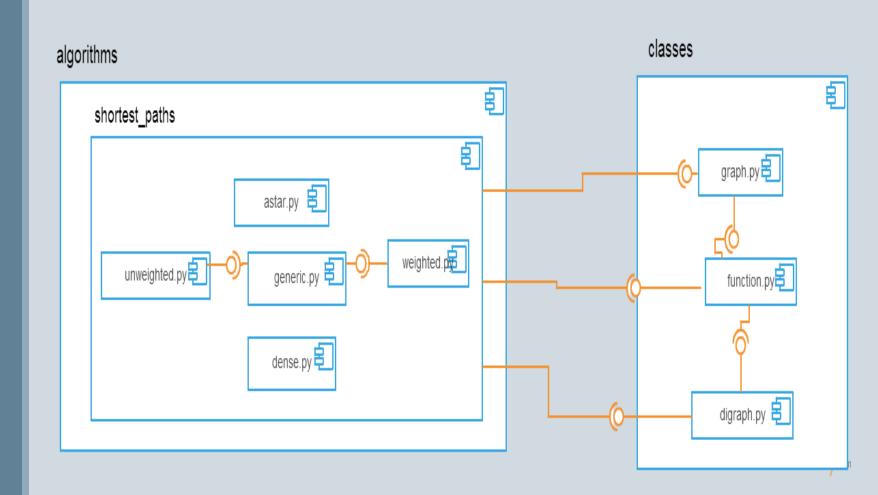
So far...(II)

Johnson's Algorithm

- One more algorithm for shortest paths
- Solves all pairs shortest path problem

Additions:

- johnson()
- tests



Pull Requests

Open: 1

Closed: 1

