## Graph\_diff documentation

- graph\_diff
  - GraphDiffAlgorithm interface for algorithms. You may use BaselineAlgorithm, ant\_algorithm/Algorithm, new\_ant\_algorithm/Algorithm as GraphDiffAlgorithm
    - construct\_diff takes two GraphWithRepetitiveNodesWithRoot and returns GraphMap object
  - GraphMap
    - eval\_difference\_complete method to complete the construction of GraphMap. In order to use not only basic but all statistical methods of GraphMap
    - get\_...
      - overlap common for two graphs nodes/edges
      - · nodes/edges
      - in\_1\_not\_in\_2/in\_2\_not\_in\_1
  - graph/GraphWithRepetitiveNodesWithRoot
    - Ir\_node functions to quickly create new nodes
    - methods, used in algorithms: \_\_contains\_\_, \_\_iter\_\_, get\_list\_of\_adjacent\_nodes. More simply, algorithms does not modify graphs.
      So GraphWithRepetitiveNodesWithRoot may be replaced with a class with methods above

General way to check graph isomorphism would be (having g1, g2):

- alg = BaselineAlgorithm()
- diff = alg. construct\_diff(g1, g2). eval\_difference\_complete()
- cond = (len(diff.get\_edges\_in\_1\_not\_in\_2()) + len(diff.get\_edges\_in\_2\_not\_in\_1()))== 0