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Programming Language: Python

Date:04/28/2022

Description: Script creates the networks for PPI files and calculate the shortest path and compare two network shortest path using Wilcoxon test.

Input files: main.py, ‘Human-PPI.txt’,’protein-list1.txt’,’protein-list2.txt’.

Required software or platform: Any python platform but I would recommend “Pycharm PC 2021.3.2(Community Edition)”.

Required library: *import pandas as pd, import networkx as nx, import numpy as np,from thinkstats2 import Pmf,from thinkstats2 import thinkplot,import matplotlib.pyplot as plt,import os,* *from scipy.stats import ttest\_ind, ttest\_ind\_from\_stats,from scipy.special import stdtr*

Required condition: All files should be in same folder ‘Assignment4’.

Important information regarding libraries.

\*\*\* thinkx library needs to be downloaded for thinkstat2

\*\*\* network version needs to be 2.8rc1.

\*\*\* Execution of shortest path length of 1st graph takes extremely high time; however, it will execute for sure.

Execution (Here I am showing how to execute script on pycharm)

1. Open pycharm
2. Make sure to set the working folder as Assignment5.
3. Select your working folder and mark it as Assignment5.
4. Then Pycharm recognize the working folder as a Source folder for the project
5. All the files will open on left side windows in Pycharm.
6. Click on main.py.
7. main.py will open and now just click on run button.

8) Script file will run and executed with desired output.