

Manual CLI Network.py

22 de agosto de 2020

Ejecutamos el CLI de python desde donde tengamos el código de network.py, en este caso sera desde la subcarpeta 'cli/' o 'code/' y se guardaran en la carpeta de 'graphs/'

```
Wilson@DESKTOP-6RS0TF8 MINGW64 ~/Jupyter/Social-Network-Analysis/P2/cli (master)
$ python network.py --help
Usage: network.py [OPTIONS] COMMAND [ARGS]...

Simple CLI for producing network models

Options:
  --help  Show this message and exit.

Commands:
  barabasi-albert
  erdos-renyi
```

Tenemos 2 opciones para generar modelos de grafo, barabasi-albert y erdos-renyi

```
Wilson@DESKTOP-6RS0TF8 MINGW64 ~/Jupyter/Social-Network-Analysis/P2/cli (master)
$ python network.py barabasi-albert --help
Usage: network.py barabasi-albert [OPTIONS]

Options:
  --n INTEGER  number of nodes
  --m INTEGER  indicates the m value, must be m < n
  --help      Show this message and exit.

Wilson@DESKTOP-6RS0TF8 MINGW64 ~/Jupyter/Social-Network-Analysis/P2/cli (master)
$ python network.py erdos-renyi --help
Usage: network.py erdos-renyi [OPTIONS]

Options:
  --n INTEGER      number of nodes
  --p FLOAT        indicates the p value, probability
  --total INTEGER  indicate how many random graphs do you want
  --help          Show this message and exit.
```

Y dependiendo del modelo, unos parámetros diferentes, En Barabasi Albert tenemos dos parámetros numero de nodos (ej -n 500) y el valor de nodos iniciales m (ej -m 3)

Erdos Renyi tendremos el numero de nodos (ej `-n 500`) probabilidad (ej `-p 0.001`) y el numero total de grafos a generar (ej `-total 10`)

En ambos podemos no especificar nada y se generara un grafo con sus parámetros por defecto, (`n=500`, `m=3`, `p=0.001` y `total=1`)

```
Wilson@DESKTOP-6RS0TF8 MINGW64 ~/Jupyter/Social-Network-Analysis/P2/cli (master)
$ python network.py barabasi-albert --n 500 --m 3
generating barabasi albert model with n = 500, m = 3

Wilson@DESKTOP-6RS0TF8 MINGW64 ~/Jupyter/Social-Network-Analysis/P2/cli (master)
$ python network.py barabasi-albert --n 500 --m 4
generating barabasi albert model with n = 500, m = 4

Wilson@DESKTOP-6RS0TF8 MINGW64 ~/Jupyter/Social-Network-Analysis/P2/cli (master)
$ python network.py barabasi-albert --n 5000 --m 3
generating barabasi albert model with n = 5000, m = 3

Wilson@DESKTOP-6RS0TF8 MINGW64 ~/Jupyter/Social-Network-Analysis/P2/cli (master)
$ python network.py barabasi-albert --n 5000 --m 4
generating barabasi albert model with n = 5000, m = 4
```