Measuring network statistics and manipulating directed networks with python

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Network statistics

- **Number of nodes**

```
G.number_of_nodes()
```

- **Number of edges**

```
G.number_of_edges()
```

- **Degrees**

```
degrees = np.array(G.degree)[:,1].astype(int)
```

- **Average degree**

```
degrees.mean()
```

- **Standard deviation**

```
degrees.var()**0.5
```

Degree distribution

- **Degree counting**

```
degree_counting =
nx.degree_histogram(G)
```

- **Normalizing by the size of the graph**

```
degree_counting =
np.array(degree_counting)/D.number_of_n
odes()
```

Directed graphs

- **Creating a directed graph**

```
D = nx.DiGraph()
```

- **In degrees**

```
D.in_degree
```

- **Out degrees**

```
D.out_degree
```