Visualizing Networks in Python

Practical guide and comparison between Matplotlib, Plotly and NetworkX

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Photo by Sebastian Unrrein on Unsplash

Every week from this website is published by the newsletter.

Update and link, where I recently released Graph explorer package for Network visualization in python through a series of articles posted on this blog and Medium. Original the link where details are discussed here. Thnx!

Introduction

Introduction Graph is a special representation of entities which have relationship among the business. It is made up of a collection of two points connected by a line, which represents a connection, with a large number of nodes and edges. Graphs are used to model pairwise relations between objects, we also have attributes or features associated with each node and edge. For example, a person represents a node and a friend relation is the edge, connecting two people. Social networks are the most popular example of these expressive formal structures that have contributed to the friends, jobs, text, pricing, etc. Because of this complicated nature, it's more important to visualize the connections between the data points to understand the information as possible. As we are in the Graph age, we need to be acquainted with the different available tools, and find the right utility attribute or, or perhaps all the different options available for a character or network, or a per-network.

Network analysis using NetworkX

Before diving into visualizations, let us first understand how to deal with a graph data both file and how we can load it into memory using Networkx in conjunction with Pandas. Pandas is a fast, powerful, flexible and easy to use open source data analysis and manipulation tool, built on the Python programming language. Below, I quick explore the Networkx a Graph and using two measures two characteristic measures, one centrality measure and one measure of community detection.

```
Nodes                    Edges
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Jackie Chan              Jackie Chan  Jackie Chan
Jackie Chan              Jackie Chan  Jackie Chan
Jackie Chan              Jackie Chan  Jackie Chan
Angela Tong Chan         Angela Tong Chan  Jackie Chan
Angela Tong Chan         Angela Tong Chan  Jackie Chan
Angela Tong Chan         Angela Tong
```