

## **Project Topic:** The Marvel Universe Social Network Analysis

### **Team Members:**

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### **Goals:**

In 1961, Marvel relaunched its superhero comic books publishing line. This new era started what has been known as the *Marvel Age of Comics*. Characters created during this period such as Spider-Man, the Hulk, the Fantastic Four, and the X-Men, together with those created during the Golden Age such as Captain America, are known worldwide and have become cultural icons during the last decades.

Today the Marvel Universe is an inter-connected social network in the story verse much like a present-day social network. The heroes have their standalone stories, some heroes help each other out in other stories and in some they come together to save the world. These ties are similar to what social networks have in real life; how people collaborate. Thus, the purpose of this project is to better understand a social network using the relationships of these fictional characters and looking for similarities and patterns.

*Given time we would also like to perhaps examine whether these characters are as popular externally in terms of comic book/ movie sales as they are in their internal network.*

### **Data:**

The dataset is sourced from Kaggle and contains the following 3 files.

1. **nodes.csv**: Contains two columns (node, type), indicating the name and the type (comic, hero) of the nodes.
2. **edges.csv**: Contains two columns (hero, comic), indicating in which comics the heroes appear.
3. **hero-edge.csv**: Contains the network of heroes which appear together in the comics. This file was originally taken from <http://syntagmatic.github.io/exposedata/marvel/>

*Link to dataset:*

<https://www.kaggle.com/datasets/csanhueza/the-marvel-universe-social-network>

**Key Questions:**

In addition to understanding how a social network functions we hope to answer some of the following questions. We will add to the list as we make discoveries during our project.

1. What characters are the most influential?
2. What characters are social hubs, or facilitators?
3. What characters are most popular?
4. Are the most popular characters the one with the most influence?
5. Are popularity and influence connected?
6. Are characters who are popular/influential in the network perceived as such by people outside the network?

**Class Topics:**

In addition to external sources, we will apply the knowledge we gain from class, more specifically the topics covered in weeks 3, 4 and 5, namely; Social Network Theory, Social Network Analysis and Measuring Social Influence.