EMIA6500R · CMAA5022 · CSM160021

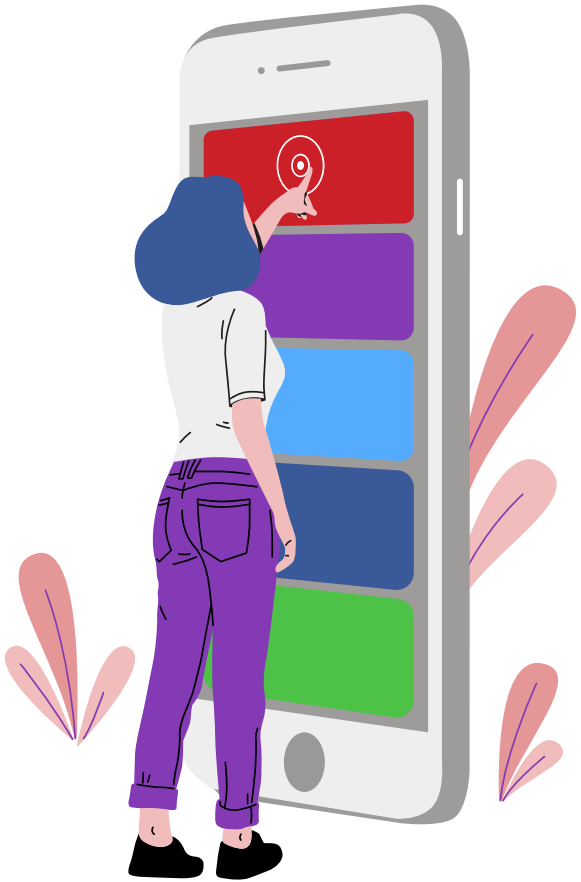
Social Media for Creatives

Lecture 06

Social Networks and their Influence

Professor Jussi KANGASHARJU;
FRI 15:00-18:00 (HKT); 09:00-12:00 (EET)

Today's Outline



01 **Lecturing**
Lecture 6: Social Networks and their Influence

02 **Digital Teacher**
Important factors in social contagion

03 **VR Storytelling**
Impact of Social Networks in the 2016 US Election

04 **Paper Reading Group Presentation**
Group 2

05 **TA Session**
Iris' tutorial session

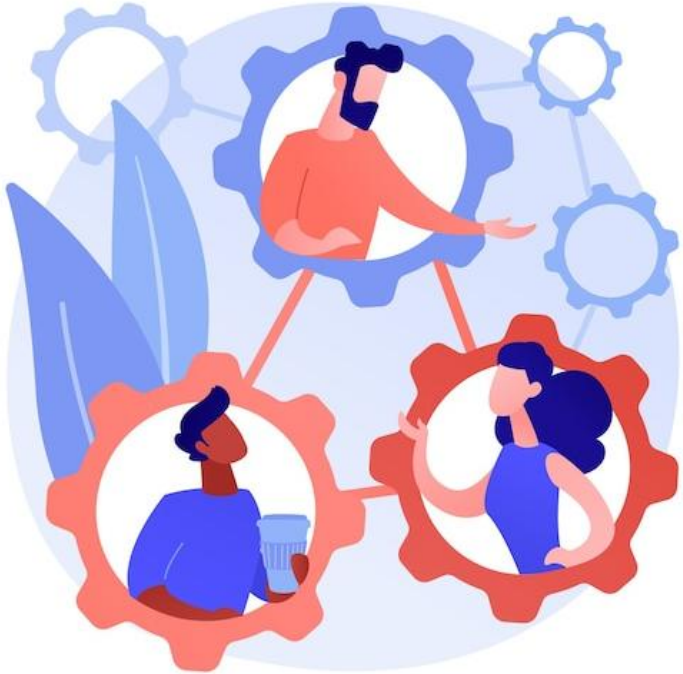
06 **VR Discussion & Participation**
Discuss with your groupmates in MetaClassroom

What Do the Following Things Have in Common?

Networks!!

- Behind each such system there is an intricate wiring diagram, a network, that defines the interactions between the components.

❖ We will never understand these systems unless we understand the networks behind it!



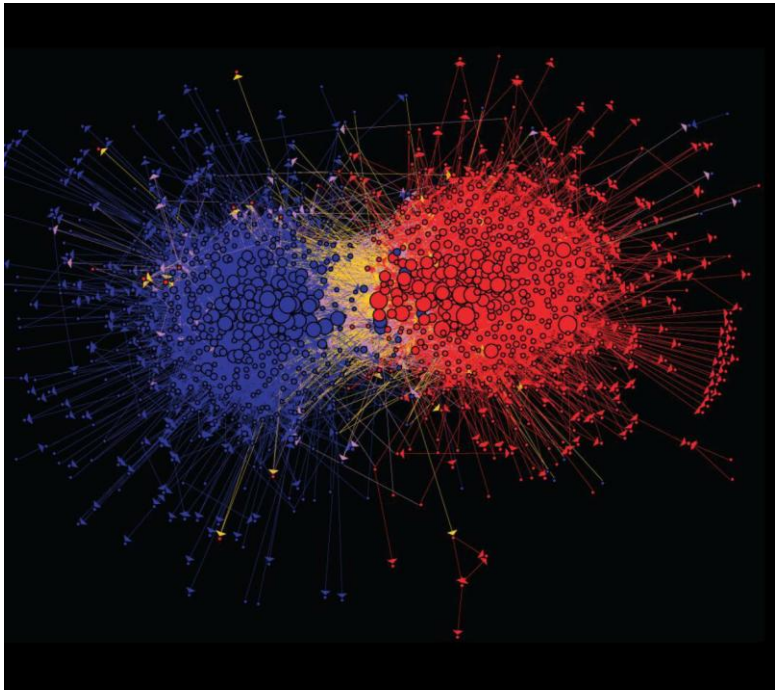
But what is a “Network”?

- A network is usually defined through:
  - 1. A collection of **nodes** (**vertices**)
  - 2. A collection of **edges** (**links**) connecting noc
- Networks are **abstractions** of **connection** and **relation**
- In a picture of a network, the **spatial location** of nodes is **arbitrary**
- Networks have been used to model a **vast array o phenomena**
  - *E.g., connections between political blogs*

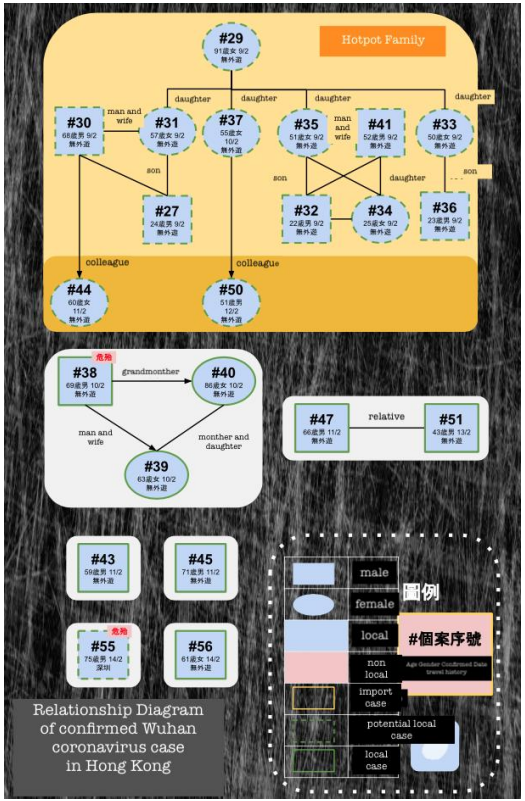
Example: Political Blogs

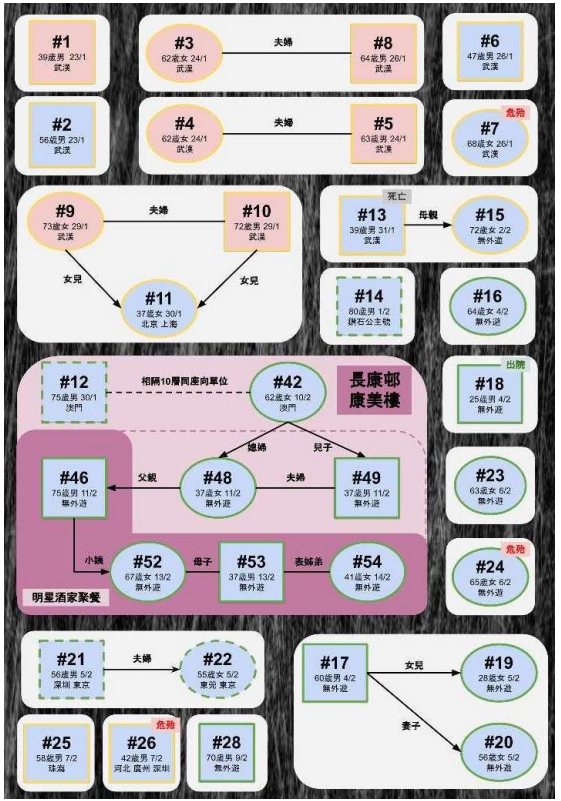
Connections between political blogs

Polarization of the network [Adamic-Glance, 2005]



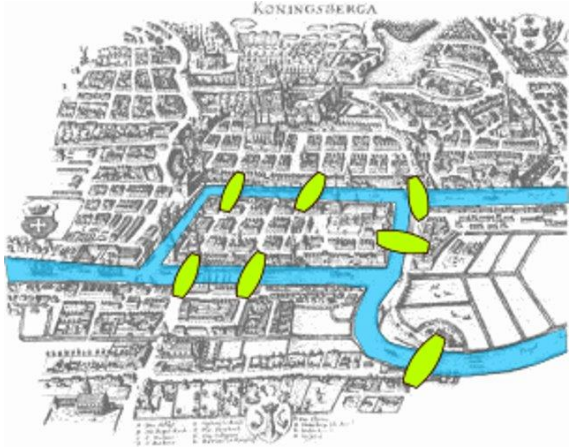
Example: Epidemic (COVID-19)

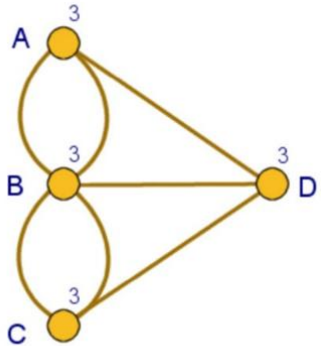




Graphs

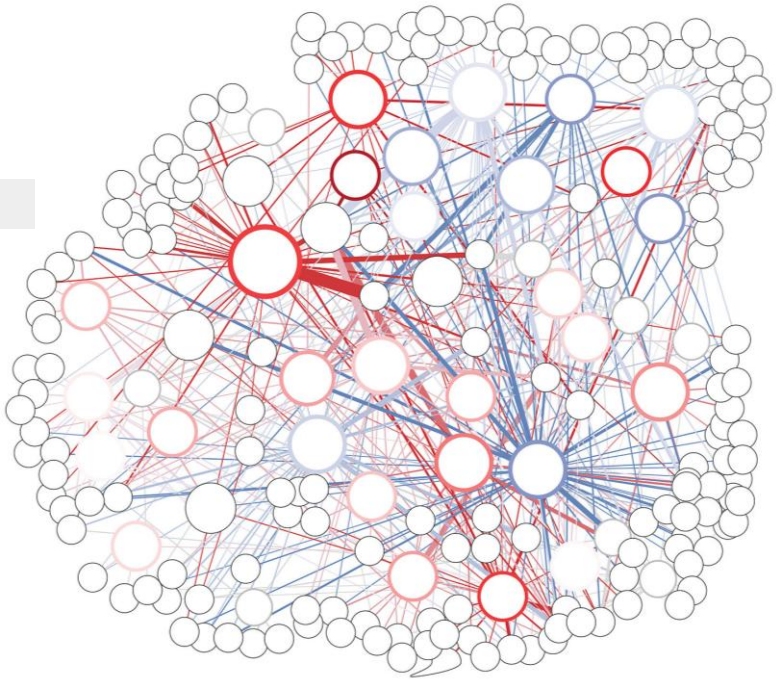
- In mathematics **networks** are called, **graphs**
- **Graph theory** starts in the **18th century**, with **Leonhard Euler**
  - ❑ The problem of *Königsberg bridges*
    - *How to return to the starting point by traveling each link of the graph once and only once.*
  - ❑ Since then graphs have been studied extensively





Networks Now

- **More and larger networks** appear due to:
  - ❑ **Technological advancements**
    - *e.g., Internet, Web*
  - ❑ **Our ability to collect more, better, and more complex data**
    - *e.g., gene regulatory networks*
- The networks with thousands, millions, or billions of nodes are **sometimes even impossible to visualize**



Example: Social Graph

Facebook social graph

4-degrees of separation [Backstrom-Boldi-Rosa-Ugander-Vigna, 2011]

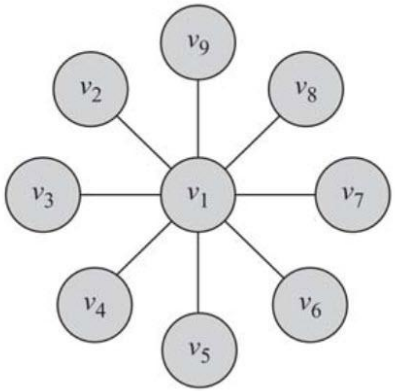
Network Measures: Centrality

- Centrality defines how **important** a node is within a network.

- The most **common types** of centrality include:
  - *Degree Centrality*
  - *Eigenvector Centrality*
  - *Katz Centrality*
  - *Betweenness Centrality*
  - *Closeness Centrality*

Degree Centrality

- Degree centrality is a measure of how many **direct connections** a node has in a network.
- A node with high degree centrality is connected to many other nodes, and therefore **has a lot of influence within the network**.
- For example, in a social network of high school students, a student with many friends would have high degree centrality.



In this graph, degree centrality for node v_1 *is* $C_d(v_1) = d_1 = 8$, *and for all others, it is* $C_j(v_j) = d_j = 1, \quad j \neq 1$

Eigenvector Centrality

- In degree centrality, we consider nodes with more connections to be more important.
- However, in real-world scenarios, having more friends **does not by itself guarantee that someone is important**: **having more important friends provides a stronger signal**.

- **Eigenvector centrality** is a measure of the importance of a node based on the number and importance of its neighbors.
- *For example, in a social network of scientists, a scientist who collaborates frequently with other well-known scientists would have high eigenvector centrality.*

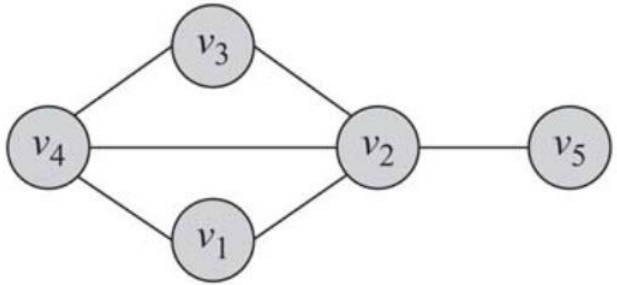
A Simple Example

NetworkX will be covered in the TA class

- According to the **eigenvalue centrality**, which node is the most central node of the graph below? (Using NetworkX)

Eigenvector centrality of each node is as follows:

```
Node 1: 0.4119170973700676
Node 2: 0.5825392535755105
Node 3: 0.4119170973700676
Node 4: 0.5236826290621273
Node 5: 0.21691733875073663
```

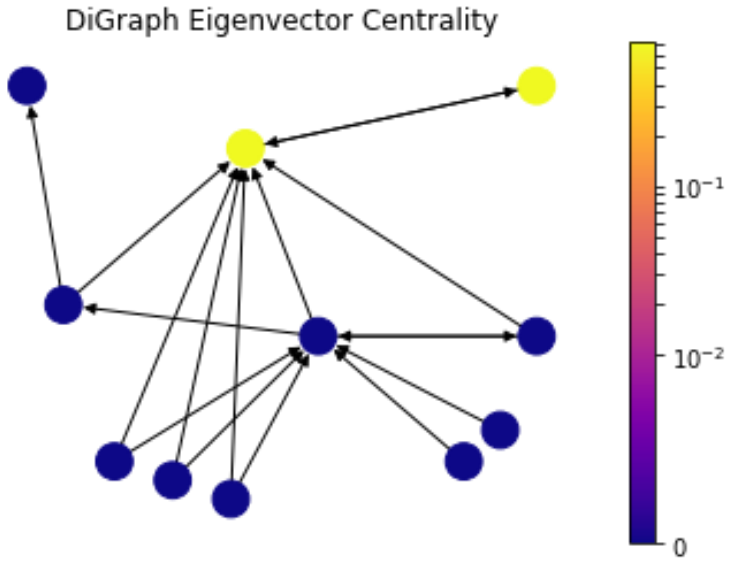


Node V2 is the most central node.

Problem with Eigenvector Centrality

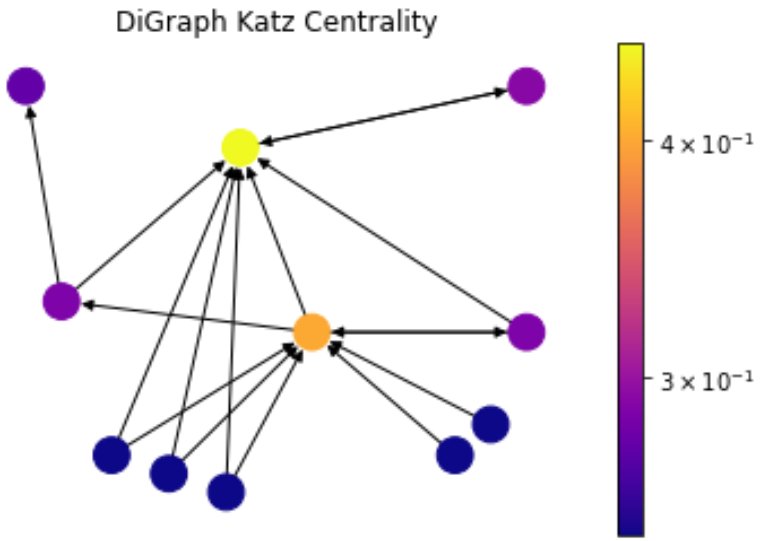
- One of the main problems with Eigenvector centrality is that:
- it may fail to produce meaningful results in networks that are **not strongly connected**, or where there are isolated nodes that have no connections to the rest of the network.

- In such cases, the eigenvector centrality scores for all nodes may be zero or even undefined.



Katz Centrality

- Katz centrality was developed as an alternative measure that addresses this problem.
- Instead of relying solely on the concept of a node's direct connections, Katz centrality incorporates both direct and indirect connections between nodes in the network.
- This means that even in networks where some nodes have no direct connections to other nodes, Katz **centrality can still assign meaningful scores to each node based on its indirect connections**.



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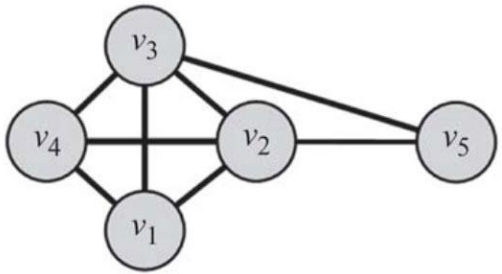
- This means that even in networks where some nodes have no direct connections to other nodes, Katz centrality can still assign meaningful scores to each node based on its indirect connections.
- According to the katz centrality, which nodes are the most central nodes of the graph below? (Using NetworkX)
- Katz centrality of each node is as follows:
- Nodes V2 and V3 are the most central nodes.




```
Node 1: 0.44062436633194485
Node 2: 0.47667544385428146
Node 3: 0.47667544385428146
Node 4: 0.44062436633194485
Node 5: 0.39656194729422983
```

A Simple Example

NetworkX will be covered in the TA class

- According to the **katz centrality**, which nodes are the most central nodes of the graph below? (Using NetworkX)

Katz centrality of each node is as follows:

```
Node 1: 0.44062436633194485
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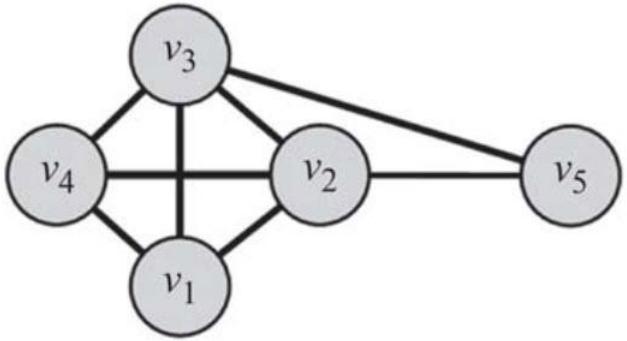
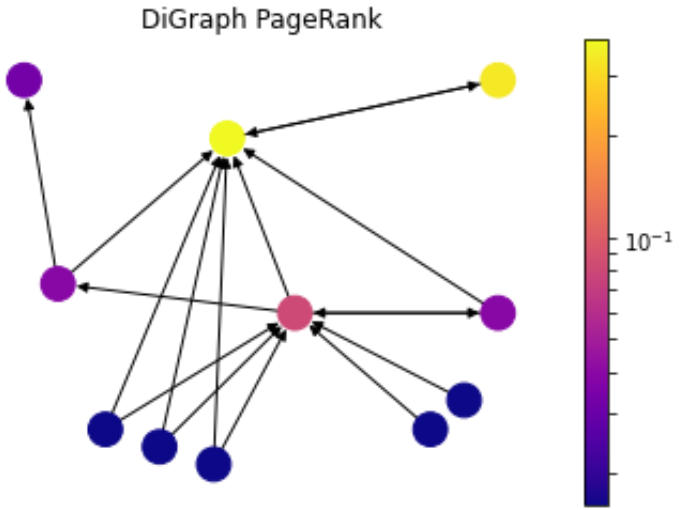
Node 4: 0.44062436633194485
Node 5: 0.39656194729422983
```



Nodes V2 and V3 are the most central nodes.

Problem with Katz Centrality

- Similar to eigenvector centrality, Katz centrality encounters some challenges.
- A challenge that happens in directed graphs is that, once a node becomes an authority (high centrality), it passes all its centrality along all of its out-links.
- This is less desirable, **because not everyone known by a well-known person is well known.**
- To mitigate this problem, one can **divide the value of passed centrality by the number of outgoing links** (outdegree) from that node such that **each connected neighbor gets a fraction of the source node's centrality**. (PageRank measure)



Pagerank

- How can a search engine know exactly which of the thousand pages on the web will be the most relevant one?
- PageRank was developed by Google founders Larry Page and Sergey Brin in 1998 as a way to determine the importance of web pages.
- A common solution is to rank the pages in order of the **number of links to that page (often called backlinks of the page)**, starting with the page that has the highest number of pointers into it. We refer to this strategy as **citation counting**.
- *Citation counting is a very commonly used measure of importance. For example, many tenure decisions are determined not by the number of publications, but by the number of citations to the publications.*

Pagerank

- But **citation counting** alone has **two problems**:
  - **Not all links are equal.**
  - **The citation counting scheme is easily tricked.**

- **Google's solution** is to define page rank recursively: "A page has high rank if the sum of the ranks of its backlinks is high."

- **Intuition behind the Google Algorithm**: Imagine that each page initially has one unit of importance. At each round, **each page shares whatever importance it has among its successors**. Pages with a lot of incoming links will receive lots of importance.

A Simple Example

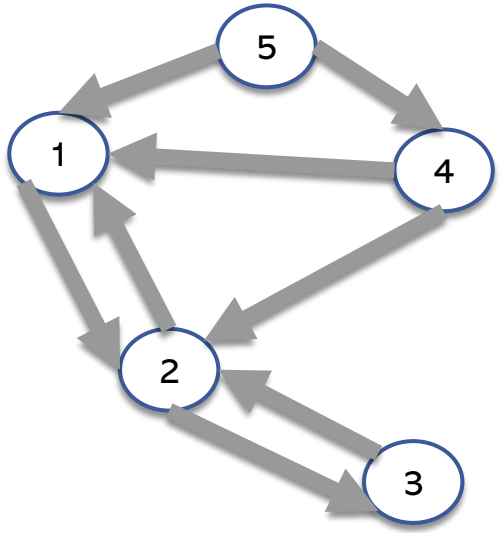
NetworkX will be covered in the TA class

- According to the **pagerank measure**, which node is the most important node of the graph below? (Using NetworkX)

Pagerank of each node is as follows:

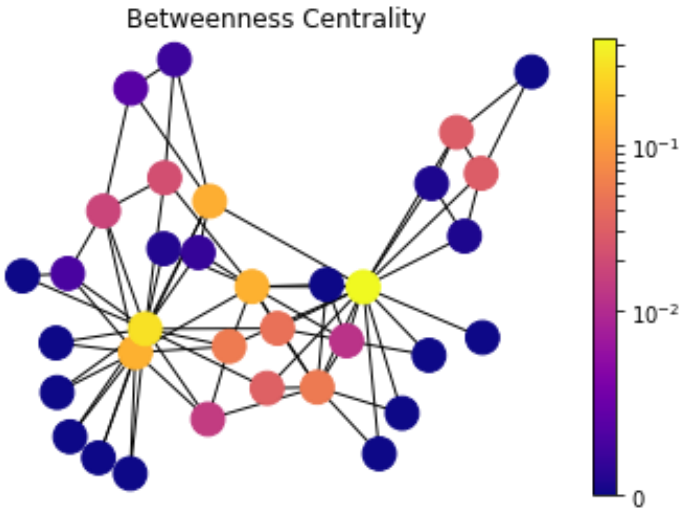
```
{1: 0.2530494065329844, 2: 0.4520699369340316,
 3: 0.22213065653298436, 4: 0.04275000000000001,
         5: 0.030000000000000006}
```

Node 2 has the highest pagerank



Betweenness Centrality

- Another way of looking at centrality is by considering how important nodes are in connecting other nodes.
- **Betweenness centrality** is a measure of how often a node lies on the shortest path between other nodes in a network.
- Nodes with high betweenness centrality act as **bridges** or **gatekeepers**, connecting different parts of the network.
- For example, in a social network of airline travelers, an airport with high betweenness centrality is one that connects many different cities and routes.



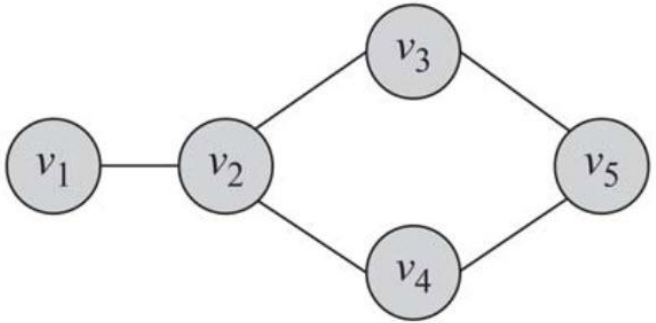
A Simple Example

NetworkX will be covered in the TA class

- According to the **betweenness centrality**, which node is the most central node of the graph below? (Using NetworkX)

Betweenness centrality of each node is as follows:

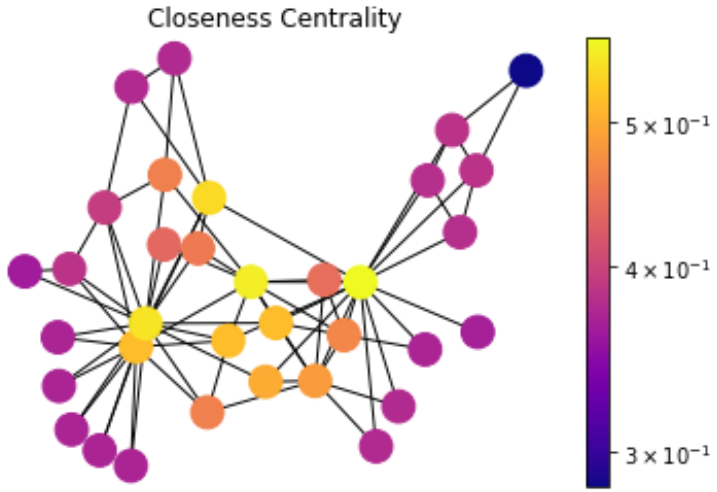
```
{1: 0.0, 2: 0.5833333333333333, 3: 0.16666666666666666,
 4: 0.16666666666666666, 5: 0.08333333333333333}
```



Node V2 has the highest betweenness centrality

Closeness Centrality

- In closeness centrality, the intuition is that the **more central nodes** are, the more quickly they can reach other nodes.
- Closeness centrality is a measure of **how quickly a node can reach all other nodes in a network**.
- Nodes with high closeness centrality are able to communicate more quickly and efficiently with other nodes in the network.
- For example, in a social network of healthcare providers, a doctor with high closeness centrality is able to quickly communicate with other doctors and healthcare professionals across different specialties and regions.



A Simple Example

NetworkX will be covered in the TA class

- According to the **closeness centrality**, which node is the most central node of the graph below? (Using NetworkX)

Closeness centrality of each node is as follows:

```
{1: 0.8, 2: 0.5714285714285714, 3: 0.4444444444444444,
 4: 0.6666666666666666, 5: 0.5714285714285714}
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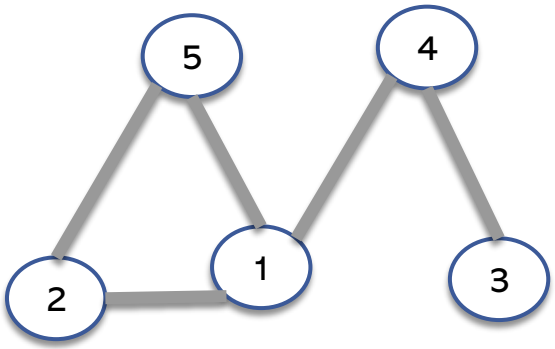


Node 1 has the highest closeness centrality

Quick Recap of Centralities

- What do each of these centrality metrics measure?

- Degree centrality: How many neighbors?
- Eigenvector/Katz: Who your neighbors are?
- Betweenness: How many others you connect?
- Closeness: How fast you reach everyone?

Semantic Inspection of Human Behavior

- So far, we have become acquainted with the most frequently used **topology measures** in networks to identify the most significant (central) nodes.
- **However**, understanding human behavior often demands a more sophisticated **semantic approach**.
- In the following, we will also delve into the concept of **influence on social networks** more semantically and explore some intriguing phenomena.

Social Influence

- Social networks have become an important platform for marketers, activists, and other groups to reach a large audience and influence their behavior.

- Example of social influence in social networks that have gone right:
- **ALS Ice Bucket Challenge**: The ALS Ice Bucket Challenge was a social media campaign that went viral in 2014.
- The campaign encouraged people to pour a **bucket of ice water** over their heads and **then nominate others** to do the same to raise awareness and funds for *amyotrophic lateral sclerosis* (or ALS) research.
- The campaign was highly successful and raised over $115 million for the ALS Association

Social Influence

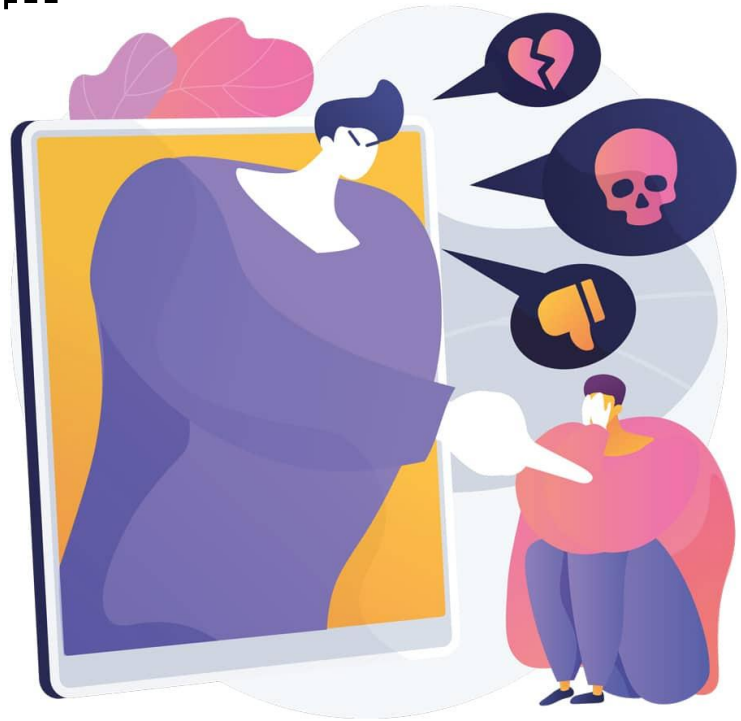
- Example of social influence in social networks that have gone wrong:
- **Trump's use of Twitter:** Trump was known for using Twitter to communicate with his supporters and to amplify his message.
- In the lead-up to the **attack on the Capitol**, Trump used Twitter to spread false claims of voter fraud and to encourage his supporters to challenge the results of the 2020 US presidential election.
- Many of his tweets were seen as promoting and inciting the violence that occurred on January 6.

Social Influence Maximization

- In general literature, social influence maximization is the process of identifying a set of individuals in a social network who are most likely to influence the behavior of other individuals in the network.
- However, there are **concerns** about the fairness and ethics of social influence maximization.

The Main Concerns: Social Harm

- One concern is that social influence maximization can be used to promote products, services, or ideas that are **harmful to individuals or society**.
- For example, an organization may use social influence maximization to promote a weight loss product that has not been scientifically proven to be effective, or to spread misinformation about vaccines.
- To ensure that social influence maximization is **fair and ethical**, organizations **should consider the potential harm** that their actions may cause and avoid promoting products or ideas that have been proven to be harmful.



The Main Concerns: Unfairness and Discrimination

- Furthermore, traditional methods for influence maximization often neglect the impact on vulnerable groups, leading to unfairness and discrimination. For example:

- **Political campaigns:** Traditional methods for social influence maximization in political campaigns often focus on targeting the most influential individuals in a social network, such as those with the most followers or highest engagement rates.

- **However**, this can lead to unfairness and discrimination if certain groups, such as **marginalized communities or low-income individuals**, are consistently excluded from the campaign's messaging and outreach.

Controlling Elections through Social Influence

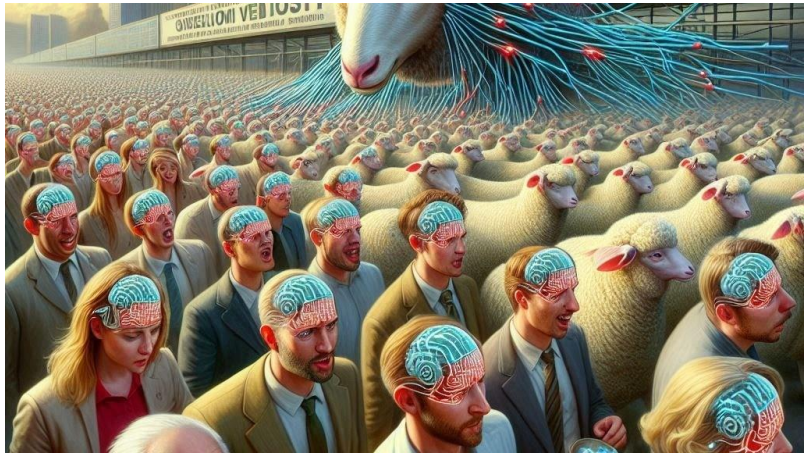
- Social media has become a key **battleground for elections**.
- Political parties and candidates are using social media to reach out to voters, raise funds, and spread their message.
- **However**, social media has also become a platform for ***fake news***, ***propaganda***, **and** ***manipulation***.
- The rise of ***bots***, ***trolls***, **and** ***fake accounts*** has made it easier to **spread disinformation and control the narrative**.

Beware of Echo chambers!!

- **Echo chambers** are online spaces where people with similar views and opinions congregate, and where dissenting voices are excluded.
- Social media algorithms are often designed in a way to show users content that is similar to what they have already liked or shared.
- This means that users are **less likely to be exposed to different viewpoints and opinions**.
- Thus, echo chambers can **reinforce existing beliefs and prejudices** and can make it easier for political parties to control the narrative.

Social Contagion

- Next, we explore the concept of **social contagion** in social networks and examine some examples of its impact on behavior, emotions, and ideas.
- **Social contagion** is a phenomenon in which *behaviors*, *emotions*, and *ideas* can **spread through social networks**.
- The spread of **social contagion** can have both **positive** and **negative** effects on *individuals* and *society* as a whole.
- The most **common types of social contagion** are:
  - **Emotional contagion**
  - **Behavioral contagion**



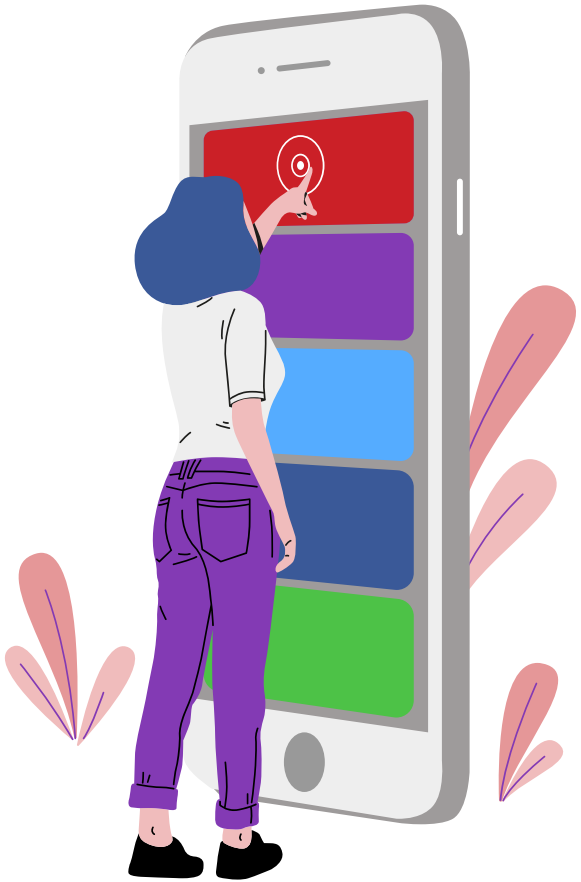
Emotional Contagion

- **Emotional contagion** refers to the spontaneous spread of emotions and related ideas.
- In the year 2012, Facebook conducted an experiment to test whether emotional states could be transferred through social networks?
- They manipulated the news feeds of nearly 700,000 users to show either more positive or negative content.
- They found that users who saw more positive content were **more likely to post positive content themselves**, while users who saw more negative content were **more likely to post negative content themselves**. This study shows that emotional states can be contagious on social networks.

Behavioral Contagion

- **Behavioral contagion** refers to the tendency for a person to copy a certain behavior of others who are either in the vicinity, or whom they have been exposed to.
- The "Ice Bucket Challenge" was an example of behavioral contagion on social networks. *(mentioned earlier)*

Today's Outline



02

Digital Teacher

Important factors in social contagion

PROFESSOR BEN

ADA

- Gender: Female
- Age: 24
- Nationality: Chinese (BBC)
- Bachelor of Arts in Media Studies
- Passionate and approachable
- Believes in the importance of understanding social media dynamics in today's world

https://christiep-academic.github.io/Social-Media-Course/#schedule (Week 6!)

Important Factors

- The **spread of social contagion** is influenced by factors such as

  1) the strength of social ties between individuals,

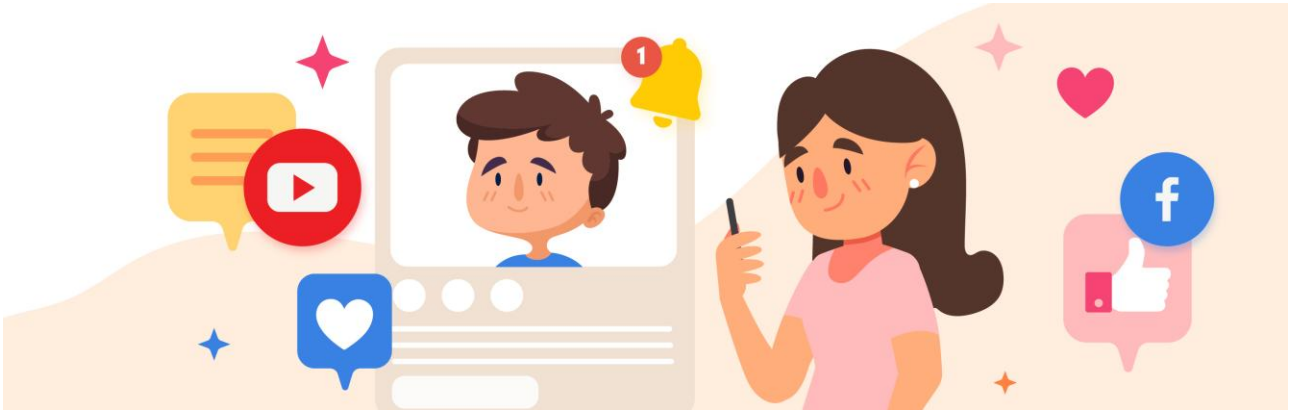
  2) the frequency of interaction between individuals,

  3) the perceived social norms surrounding the behavior, emotion, or idea

  4) Susceptibility to social influence

Strength of social ties

- The strength of social ties refers to the degree of closeness or intimacy between individuals in a social network.
- Individuals are more likely to be influenced by social contagion **from individuals with whom they have stronger ties**.
- Strong ties are characterized by *frequent communication*, *emotional support,* and *shared experiences*.
- For example, a study by Christakis and Fowler (2007) found that individuals are more likely to gain weight if their friends are also gaining weight, and **this effect is stronger for close friends than for more distant acquaintances**. This study demonstrates that social contagion is more likely to occur among individuals with strong social ties.



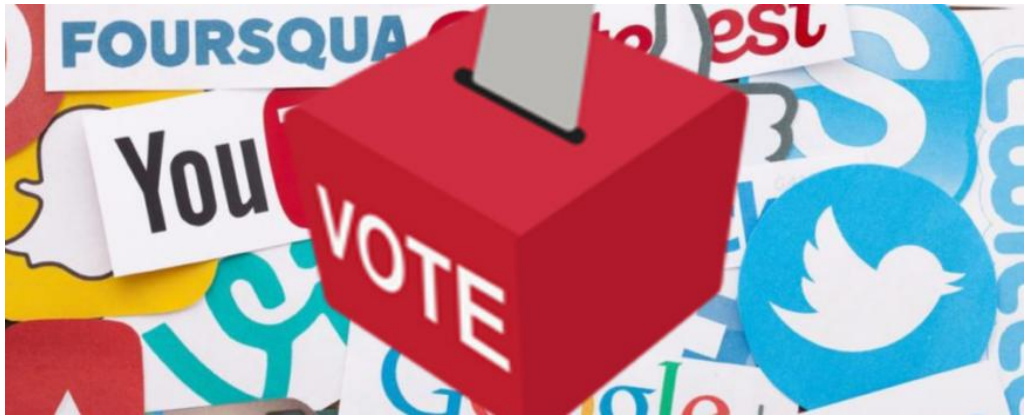
Frequency of Interaction

- The frequency of interaction between individuals in a social network also plays a role in the spread of social contagion.

- Individuals who interact more frequently are more likely to be influenced by each other's behavior, emotions, and ideas.
- This is because **frequent interaction increases the opportunities for exposure to social contagion**.
- For example, a study conducted by Kramer et al. in 2014 found that emotional contagion on Facebook was more likely to occur between individuals who had more frequent interactions with each other.

Perceived Social Norms

- The perceived social norms surrounding a behavior, emotion, or idea can also influence social contagion.
- If an individual believes that a particular behavior or emotion is common or desirable within their social network, they may be more likely to adopt that behavior or emotion themselves.
- For example, a study published in the journal *Nature* found that **individuals were more likely to vote if they believed that voting was a common behavior among their social network**.



Susceptibility to Social Influence

- Finally, the susceptibility of individuals to social influence is an important factor in social contagion.
- Some individuals may be more susceptible to social influence due to factors such as their *personality*, *social status*, or *emotional state*.
- In a study published in the journal *Social Science & Medicine*, researchers examined the role of social support in the adoption of healthy behaviors.
- The study found that individuals who reported higher levels of social support were more likely to adopt healthy behaviors, such as quitting smoking or eating a healthy diet.
- This suggests that **individuals who feel supported by their social network may be more susceptible to positive social influence and more likely to adopt healthy behaviors**.

Application driven by Social Network Interaction: Online Gifting

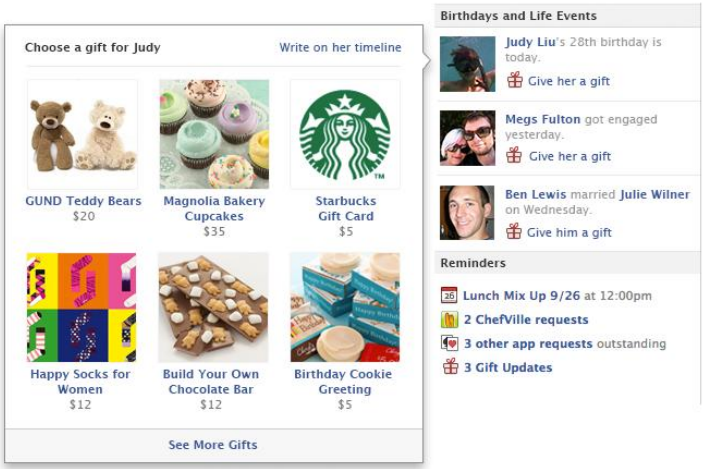
- **Next,** we delve into a case study on practical applications driven by social network interaction: online gifting.
- `Online gifting refers to the act of sending virtual gifts to people using social networks or other digital platforms.
- These gifts can be in the form of *virtual cards, emojis, stickers, or even real products purchased through online shopping websites. The sender usually pays for the gift, which is then delivered to the recipient through the platform.*
- Online gifting **reduces geographical and temporal barriers.**
- **Online gifting in social networks** can be connected to **behavioral contagion** in several ways.

Behavioral Contagion of Gifting

- For example, the popularity of online gifting **can spread rapidly through social influence.**
  - When individuals see their friends and family members sending virtual gifts to each other, **they may feel compelled to do the same** in order to fit in and maintain their social connections.
  - This can lead to a cycle of online gifting behavior that spreads throughout the network.

Facebook Gifts

- **Facebook Gifts** is a social commerce product that enables Facebook users to purchase and send gifts to their friends and family members through the platform.
- Launched in 2012, this service provides a convenient way for users to celebrate special occasions and milestones with their loved ones, while also generating revenue for the social media giant.



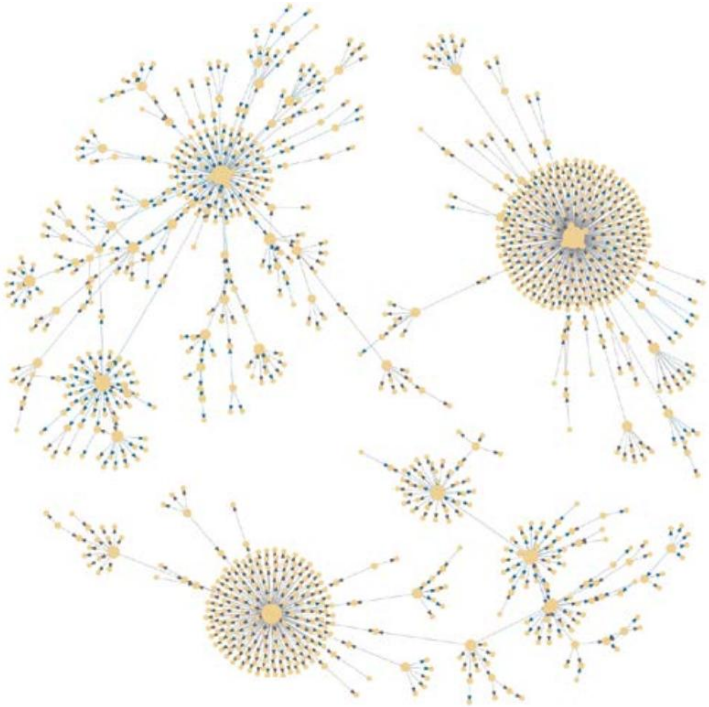
Facebook Gifts

- One of the most significant features of **Facebook Gifts** is its **versatility**.
- The platform offers a **wide range of gift options**, including *electronic gift cards for popular retailers like Amazon, iTunes, and Starbucks, as well as physical goods like flowers, books, and toys.*
- Users can choose from **different price ranges** to fit their budget and select **personalized messages** to accompany their gifts.
- Facebook Gifts also includes an interface that displays friends' **birthdays**, **encouraging users to send gifts** as a way to celebrate their special day.

Research on Facebook Gifts

- In a CHI 2018 study by Kizilcec et al., the authors examined **1.5 million gift exchanges** on Facebook and showed that:
- receiving a gift causes individuals to be 56% more likely to give a gift in the future.

Additional surveys show that online gift giving was more **socially acceptable** to those who learned about it by observing friends' participation instead of a non-social encouragement



Illustrative network of gift exchange. Directed edges correspond to gifts from senders to recipients.

Example: WeChat's "Blue Packet"

- "蓝包" translates to "blue packet," resembling traditional **red packet** used for gifting money and it is used for promotions, discounts, and marketing campaigns
- **Feature**
  - Similar to WeChat "Red Packet"
  - Choose a **product** and pay to gift it to a **WeChat friend**
  - Recipient must confirm address after receiving; if declined, it will be automatically returned within 24 hours
- **Usage Scenarios**
  - Currently mainly in **WeChat Shop**
  - Purchase limit is set at **RMB 10,000**

Example: WeChat's "Blue Packet"

- **Payment Attributes**
  - Enhances social emotional attributes
  - Increases **user reliance** on and frequency of WeChat Pay usage
  - Strengthens WeChat Pay's position in the **e-commerce sector**
  - Combining **social media and payment features** for a seamless experience
- **Market Impact**
  - Attracts more **merchants** to join WeChat Shop
  - Encourages other payment platforms to launch personalized services
  - Promotes **innovation** in the integration of payment with social, entertainment, and lifestyle services

Social interaction in an Extreme Form: Social Activism

- When social interaction takes an extreme form, it often **manifests as social activism**, where individuals or groups passionately advocate for a cause, sometimes using unconventional or radical methods to draw attention to their goals.
- **Environmental activism** is a prominent example of this, as activists work to address urgent issues like climate change, deforestation, pollution, and biodiversity loss.
- **Social networks have become an essential tool** for environmental activists to reach out to a broader audience and mobilize support for their cause.

Hashtags: #ClimateActionNow

- Environment activists use hashtags such as #ClimateActionNow, #ActOnClimate, and #FridaysForFuture to create a sense of urgency and demand that governments take.

- **#ClimateActionNow** is a hashtag that is used by climate activists to demand immediate action on climate change.
- The hashtag was popularized in 2019 during the United Nations Climate Action Summit when young climate activists, such as **Greta Thunberg**, used it to call on world leaders to take urgent and ambitious action on climate change.
- The hashtag continues to be used by climate activists to call for global action on climate change.

Hashtags: #ActOnClimate

- **#ActOnClimate** is another hashtag used by climate activists to demand action on climate change.
- The hashtag was popularized in 2015, during the United Nations Climate Change Conference in Paris.
- The conference resulted in the Paris Agreement, a global agreement to combat climate change.
- The hashtag continues to be used by climate activists to demand that governments and businesses take concrete actions to address climate change.

Hashtags: #FridaysForFuture

- **#FridaysForFuture** is a widespread hashtag that is associated with the youth-led climate movement started by **Greta Thunberg**.
- Thunberg began **skipping school on Fridays** to protest outside the Swedish parliament, demanding that the government take more action on climate change.
- Her protests gained international attention, and the movement has grown to include students in countries around the world who protest every Friday under the banner of Fridays For Future.
- The hashtag is used to share photos and updates from protests and events organized by the movement.

Case Study of Downstream Application on Social Influence: Influencer Marketing

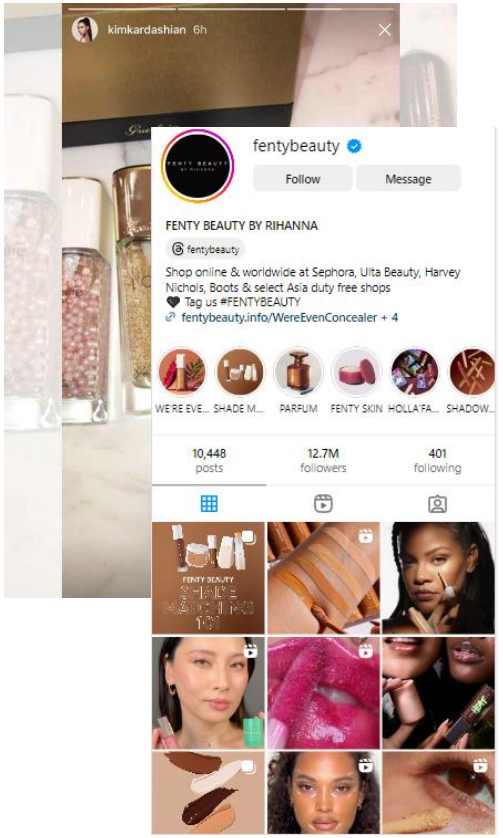
- Lastly, we discuss about a social influence application closely associated with out life -- **influencer marketing**.
- Influencer marketing is a form of marketing focusing on **identifying and targeting influential users** and **stimulating them to endorse a brand or specific products** through their social media activities (Veirman, 2017).

- In this context, influencers are those with the power to **affect the buying habits or quantifiable actions of others** by uploading some original or **sponsored** content to social media platforms like Instagram, YouTube, etc.

- In influencer marketing, **consumers** also play an important role on **personalized recommendation**, by sharing their opinions and experiences about the products.

Influencer Marketing on Social Media

- With the rise of social media, influencer marketing has increasingly **affected consumer behavior**.
- Almost **70%** of Western retailers use some form of influencer marketing and the market size of influencer marketing for 2020 is estimated to reach **$9.7** billion (up from **$1.7 billion** in 2016) (Influencer).
- Moreover, these marketing strategies appear to be successful. For example, it is estimated that **42%** of the daily active users of Instagram have made at least one influencer-based purchase in their past (Source)
  - **23%** of Facebook's daily users have already made purchases on the recommendation of bloggers or influencers.
  - On Twitter, **29%** of the platform's daily users have done so (Source).



Influencer Marketing in China

- In recent years, influencer marketing has gained great attention from brands and been thriving in **China**.
- According to Statista, the market size of influencer marketing achieved at **98 billion** yuan in 2021 with **44%** year-over-year growth (Statista).
- One unique aspect is the popularity of **Key Opinion Leaders (KOLs),** who are often celebrities, experts, or industry insiders with large followings on social media platforms like WeChat, Weibo, and Douyin.
- With the prevalence of live streams, **e-commerce streaming** has become the major way for KOLs to promote and sell products to followers.

Austin Li - also known as “Lipstick King” sold **$1.7 B** worth of goods in a **12-hour** Livestream for Alibaba’s Singles Day.

Research on Influencer Marketing

- Influencer marketing has gained great attention in research communities, and many researchers have studied it in various topics.
- A major line in this area is modeling or **profiling influencers' behaviors in markets**.

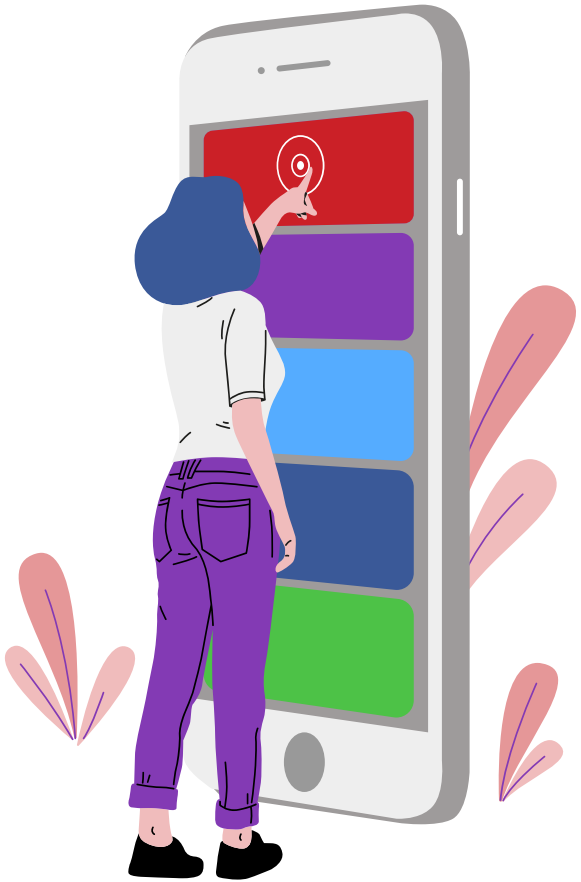
- Lou and Yuan have presented that influencers' **trustworthiness**, **attractiveness**, and **similarity** to their followers **positively** influence on expanding brand awareness and increase purchase intentions (Luo, 2018).

- Some researchers also talk a closer look on **social relation** between influencers. Kim *et al.* have shown that influencers are **tightly connected** to each other and have **common followers in OSNs**, especially when they have similar occupations (Kim, 2017).

Research on Influencer Marketing

- From the aspect of **machine learning techniques**, Kim *et al.* propose a multimodal deep learning model on Instagram called **Influencer Profiler** (Kim, WWW 2020) for
  - Classifying influencers into specific interests/topics (e.g., fashion, beauty).
  - Classifying influencers' posts into certain categories.
- Compared with previous works, the authors pay more attention to identify **topics** (or categories) that **influencers are interested in**, which is crucial for **brands** to hire proper influencers and **maximize marketing effect**.
- For feature engineering, the authors majorly focus on two types of features:
  - **Image-based**: Vectorized images in posts by a pre-trained model.
  - **Text-based**: Topics extracted by Bert (a model for extracting major topics in text content.)

Today's Outline



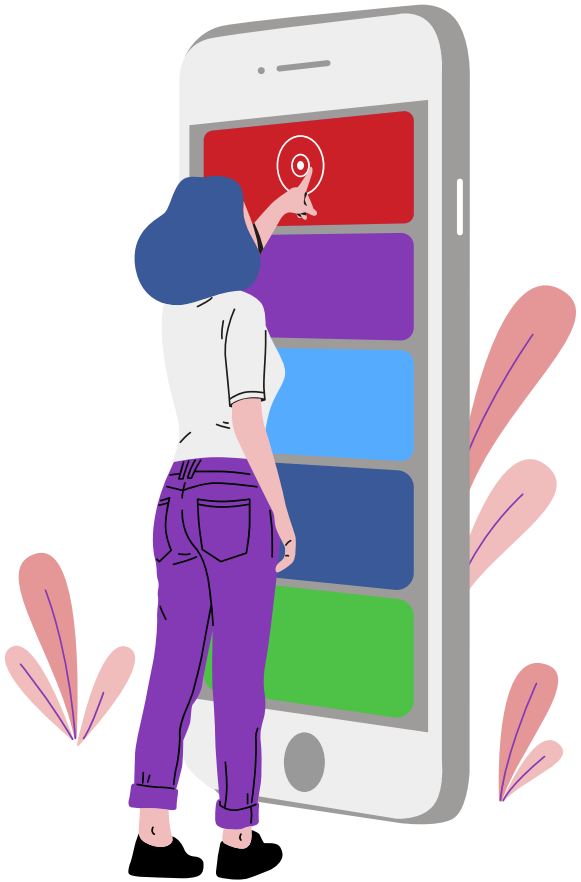
03

VR Storytelling

Impact of Social Networks in the 2016 US Election

The VR story showcases **the use of social network and echo chambers** in the 2016 US election (by Yuanyuan Mao and Yibo Wang, 2024).

Today's Outline



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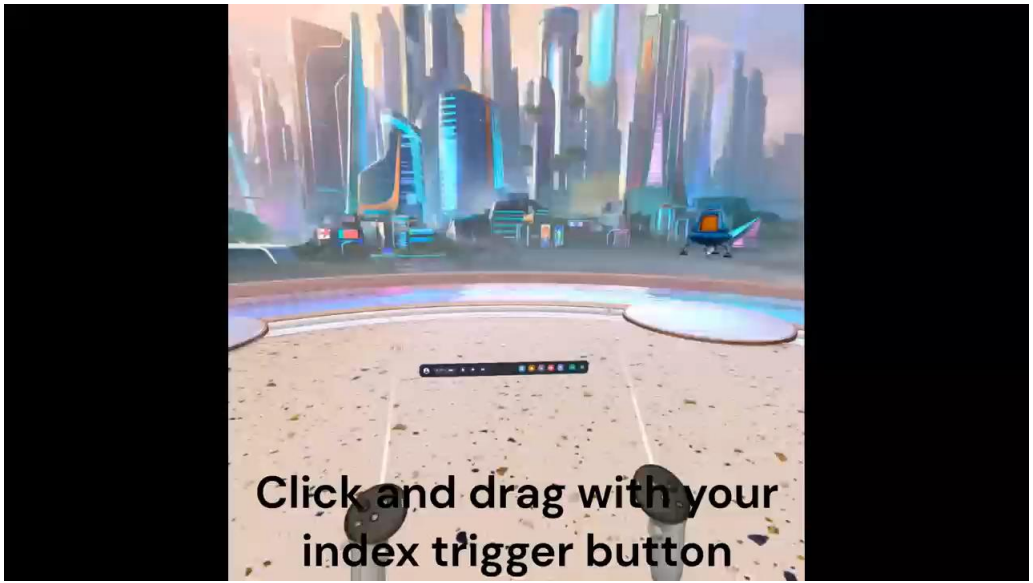
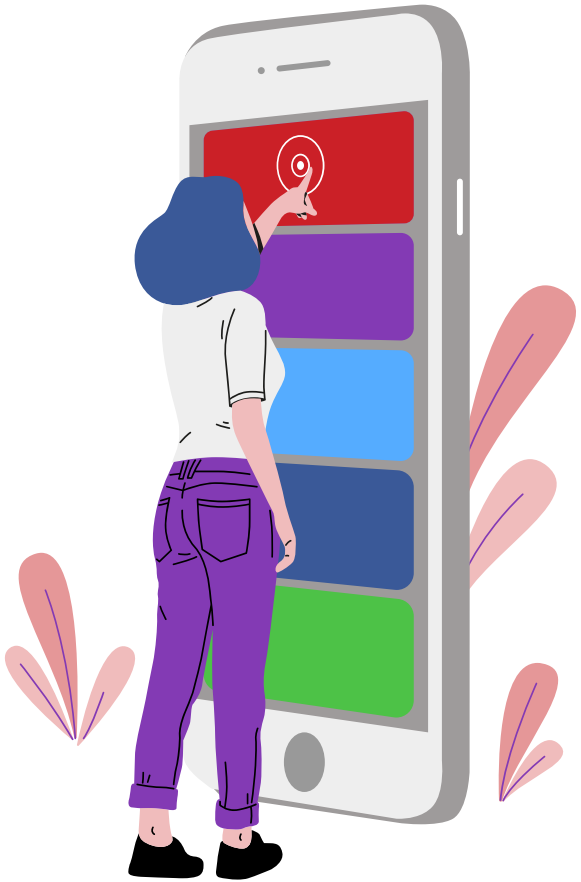


How to launch our VR experience...

Today's Outline



04

Paper Reading Group Presentation

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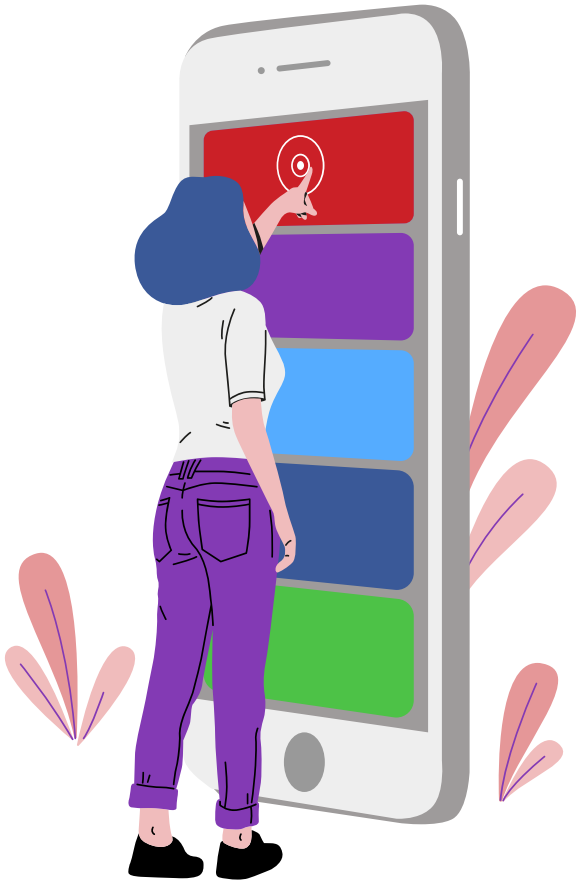


05

TA Session

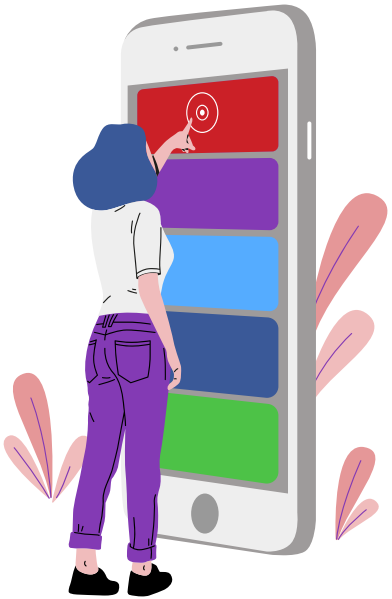
Iris' tutorial session

Today’s Outline

06

VR Discussion & Participation

Discuss with your groupmates in MetaClassroom



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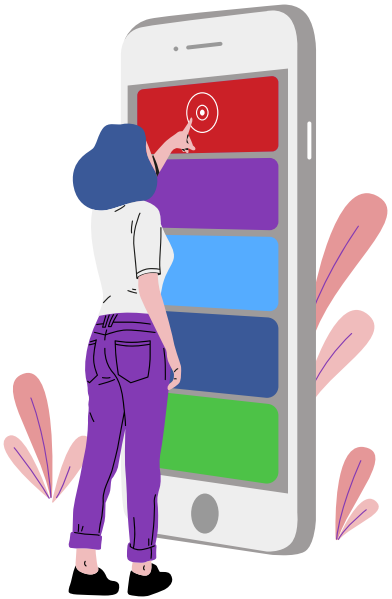

Map the network around your phenomenon. Add to Miro:

- Who are the key actors?
- Who influences whom?
- How does information spread?
- What role do algorithms play?

Sketch a rough network diagram.

Share network maps. Discuss:

- Do we see the same key actors?
- How does network structure differ in HK vs Helsinki?
- Where does influence concentrate?
- Are there gatekeepers, bridges, isolated clusters?
- Identify one insight about network power, one surprising connection.

Create "Week 6: Networks" section with:

- Combined network sketch, key actors and their roles, how spreading works, cross-cultural network differences, connections to previous weeks.
- Individual reflection: Who has more power than you expected? What network dynamic surprised you?