



**CELEBRATING  
10 YEARS OF  
SOCIAL  
NETWORK  
INFORMATICS  
STUDIES**



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MATSUYAMA  
UNIVERSITY,  
JAPAN**

# PLAN

- **A Brief History of SNS before MISNC**
- **A Brief History of SNS after MISNC**
- **10 Years of MISNC**

# A BRIEF HISTORY OF SNS BEFORE MISNC

Year	SNS	Smartphone	Mobile Network
2004	<b>Facebook</b> launched as a social network for college students <sup>1</sup>	Motorola Razr V3 released as a thin flip phone with a camera <sup>2</sup>	<b>3G networks</b> started to offer faster data transmission and video calling <sup>3</sup>
2005	<b>YouTube</b> launched as a video-sharing platform <sup>1</sup>	Nokia Nseries released as a line of multimedia smartphones <sup>2</sup>	<b>EDGE technology</b> improved the data speed of 2G networks <sup>3</sup>
2006	<b>Twitter</b> launched as a microblogging service with 140-character limit <sup>4</sup>	BlackBerry Pearl released as a smartphone with email and web browsing features <sup>2</sup>	<b>WiMAX technology</b> offered wireless broadband access over long distances <sup>3</sup>
2007	<b>Instagram</b> launched as a photo-sharing app with filters <sup>4</sup>	<b>iPhone</b> released as the first touchscreen smartphone with an app store <sup>25</sup>	<b>LTE technology</b> introduced as a standard for 4G networks <sup>36</sup>
2008	<b>LinkedIn</b> launched as a professional networking site <sup>4</sup>	<b>Android OS</b> released as an open-source operating system for smartphones <sup>25</sup>	<b>HSPA+ technology</b> enhanced the performance of 3G networks <sup>3</sup>
2009	<b>WhatsApp</b> launched as a cross-platform messaging app <sup>4</sup>	Samsung Galaxy S released as the first smartphone with a Super AMOLED display <sup>25</sup>	<b>LTE-Advanced technology</b> improved the speed and capacity of 4G networks <sup>36</sup>
2010	Pinterest launched as a social bookmarking site for visual content <sup>4</sup>	iPhone 4 released with a Retina display and a front-facing camera <sup>25</sup>	<b>Wi-Fi Direct technology</b> enabled peer-to-peer wireless connections without a router <sup>3</sup>
2011	Snapchat launched as a photo and video messaging app with self-destructing feature <sup>4</sup>	Samsung Galaxy Note released as the first phablet with a stylus pen <sup>25</sup>	<b>NFC technology</b> enabled contactless payments and data exchange between
2012	<b>TikTok</b> launched as a short-video sharing app with music and effects <sup>47</sup>	iPhone 5 released with a larger screen and LTE support <sup>25</sup>	<b>VoLTE technology</b> enabled voice calls over LTE networks <sup>36</sup>
2013	Vine launched as a short-video sharing app with looping feature <sup>4</sup>	HTC One released with an aluminum body and dual front-facing speakers <sup>2</sup>	<b>LTE-Advanced Pro technology</b> enhanced the reliability and efficiency of 4G networks <sup>3</sup>
Details: 1. ourworldindata.org, 2. thoughtco.com, 3. mitel.com, 4. online.maryville.edu, 5. theguardian.com, 6. rfpag.com, 7. en.wikipedia.org, 8. historycooperative.org, 9. a.storyblok.com, 10. en.wikipedia.org, 11. cengn.ca, 12. allaboutcircuits.com			

# A BR

# SNS

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2011	Snapchat launched as a photo and video messaging app with self-destructing feature <sup>4</sup>
2012	TikTok launched as a short-video sharing app with music and effects <sup>4</sup>
2013	Vine launched as a short-video sharing app with looping feature <sup>4</sup>

Details: 1. ourworldindata.org, 8. historycooperative.org, 9. a

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**YouTube** launched as a video-sharing platform<sup>1</sup>

**Twitter** launched as a microblogging service with 140-character limit<sup>4</sup>

**Instagram** launched as a photo-sharing app with filters<sup>4</sup>

**LinkedIn** launched as a professional networking site<sup>4</sup>

**WhatsApp** launched as a cross-platform messaging app<sup>4</sup>

**Pinterest** launched as a social bookmarking site for visual content<sup>4</sup>

**Snapchat** launched as a photo and video messaging app with self-destructing feature<sup>4</sup>

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**Vine** launched as a short-video sharing app with looping feature<sup>4</sup>

Mobile Network
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and video calling <sup>3</sup>
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ogy offered wireless
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# A BRIEF HISTORY OF SNS

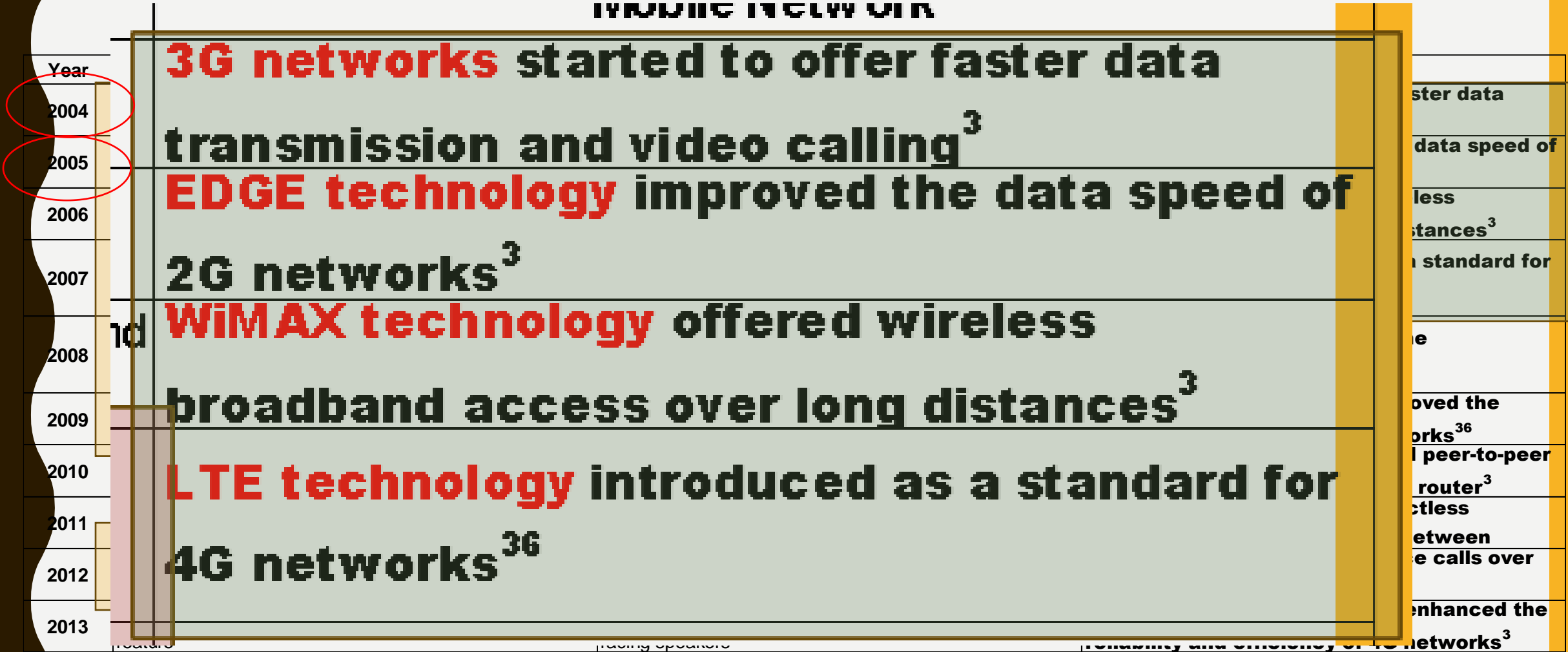
Year	SNS	Smartphone	Mobile Network
2004	Facebook launched with social networking features <sup>4</sup>		
2005	YouTube launched as a video sharing platform		
2006	Twitter launched with microblogging		
2007	Instagram launched with photo sharing	iPhone released as the first touchscreen smartphone with an app store <sup>25</sup>	
2008	LinkedIn launched as a professional networking site	Android OS released as an open-source operating system for smartphones <sup>25</sup>	
2009	WhatsApp launched as a messaging app		
2010	Pinterest launched as a social bookmarking and image-centric content management system		
2011	Snapchat launched with social messaging		
2012	TikTok launched with music and effects <sup>47</sup>	iPhone 5 released with a larger screen and LTE support	LTE networks <sup>36</sup>
2013	Vine launched as a short-video sharing app with looping feature <sup>4</sup>	HTC One released with an aluminum body and dual front-facing speakers <sup>2</sup>	LTE-Advanced Pro technology enhanced the reliability and efficiency of 4G networks <sup>3</sup>

Details: 1. ourworldindata.org, 2. thoughtco.com, 3. mitel.com, 4. online.maryville.edu, 5. theguardian.com, 6. rfpag.com, 7. en.wikipedia.org,

8. historycooperative.org, 9. a.storyblok.com, 10. en.wikipedia.org, 11. cengn.ca, 12. allaboutcircuits.com

# A BRIEF HISTORY OF SNS

EVOLVING NETWORKS



Details: 1. ourworldindata.org, 2. thoughtco.com, 3. mitel.com, 4. online.maryville.edu, 5. theguardian.com, 6. rfpag.com, 7. en.wikipedia.org, 8. historycooperative.org, 9. a.storyblok.com, 10. en.wikipedia.org, 11. cengn.ca, 12. allaboutcircuits.com



# A BRIEF HISTORY OF SNS AFTER MISNC

Year	SNS	Smartphone	Mobile Network
2014	Telegram launched as a secure messaging app with end-to-end encryption	iPhone 6 and 6 Plus released with larger screens and NFC support	Bluetooth Low Energy technology reduced the power consumption of wireless connections
2015	Periscope launched as a live-streaming app integrated with Twitter	Samsung Galaxy S6 Edge released with a curved edge display	LTE-Unlicensed technology used unlicensed spectrum for LTE networks
2016	Musical.ly merged with TikTok to expand its global reach	iPhone SE released as a smaller and cheaper version of iPhone 6S	LTE-M technology optimized LTE networks for IoT devices
2017	Steemit launched as a blockchain-based social media platform that rewards users with cryptocurrency	iPhone X released with an edge-to-edge OLED display and Face ID feature	NB-IoT technology enabled low-power wide-area network for IoT devices
2018	BitClout launched as a blockchain-based social media platform that allows users to invest in influencers' profiles	Huawei P20 Pro released with a triple rear camera system and AI features	5G networks started to offer ultra-fast data speed and low latency for various applications
2019	Lasso launched as a short-video sharing app by Facebook to compete with TikTok	Samsung Galaxy Fold released as the first foldable smartphone	mmWave technology used high-frequency spectrum for 5G networks
2020	Clubhouse launched as an invite-only audio-chat app that hosts live conversations	iPhone 12 released with 5G support and MagSafe feature	SA (Standalone) mode enabled 5G networks to operate independently from 4G networks
2021	Twitter Spaces launched as an audio-chat feature within Twitter that allows users to join or host live conversations	Samsung Galaxy Z Fold3 released with an under-display camera and S Pen support	Open RAN technology enabled more flexibility and interoperability for mobile network operators
2022	Meta launched as a rebranding of Facebook to emphasize its focus on the metaverse, a virtual environment where people can interact through avatars	iPhone 14 released with a notchless design and in-screen Touch ID feature	C-V2X technology enabled direct communication between vehicles and infrastructure for enhanced safety and efficiency
2023	TikTok expected to surpass Facebook as the most popular social media platform with over 2.5 billion monthly active users <sup>123</sup>	Samsung Galaxy Z Roll expected to be the first smartphone with a rollable display that can extend or retract its screen size	6G networks expected to start trials in some countries, offering terabit-level data speed and sub-millisecond latency

Details:1. statista.com, 2. dataportal.com, 3. smartinsights.com

# A

## Smartphone

# OF SNS

Year		Smartphone	Mobile Network
2014	Telegram with end-to-end encryption	iPhone 6 and 6 Plus released with larger screens and NFC support	Bluetooth Low Energy technology reduced the power consumption of wireless connections
2015	Periscope integrated into Instagram	Samsung Galaxy S6 Edge released with a curved edge display	LTE-Unlicensed technology used unlicensed spectrum for LTE networks
2016	Musical.ly became a global phenomenon	iPhone SE released as a smaller and cheaper version of iPhone 6S	LTE-M technology optimized LTE networks for IoT devices
2017	Steemit and Cryptocurrency	iPhone X released with an edge-to-edge OLED display and Face ID feature	NB-IoT technology enabled low-power wide-area network for IoT devices
2018	BitCloud and Influencer marketing	Huawei P20 Pro released with a triple rear camera system and AI features	5G networks started to offer ultra-fast data speed and low latency for various applications
2019	Lasso launched on Facebook	Samsung Galaxy Fold released as the first foldable smartphone	mmWave technology used high-frequency spectrum for 5G networks
2020	Clubhouse app that revolutionized audio streaming	iPhone 12 released with 5G connectivity and a notchless design	SA (Standalone) mode enabled 5G networks to operate independently from 4G networks
2021	Twitter introduced a new host live video feature	Samsung Galaxy Z Flip released as the first flip phone	Open RAN technology enabled more flexibility and interoperability for mobile network operators
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# A BRIEF HISTORY OF SNS

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2014	Telegram launched as a messaging app with end-to-end encryption
2015	Periscope launched as a live video streaming app integrated with Twitter
2016	Musical.ly merged with TikTok for global reach
2017	Steemit launched as a decentralized media platform that rewards users with cryptocurrency
2018	BitClout launched as a decentralized media platform that allows influencers to monetize their profiles
2019	Lasso launched as a social media app for Facebook to compete with Instagram
2020	Clubhouse launched as a social audio app that hosts live conversations
2021	Twitter Spaces launched as a live audio feature within Twitter to allow users to host live conversations
2022	Meta launched as a rebranding of Facebook to emphasize its focus on the metaverse in an environment where people use avatars
2023	TikTok expected to surpass Instagram as the most popular social media app with over 1 billion monthly active users. Details: 1. statista.com, 2. statista.com

**5G networks** started to offer ultra-fast data speed and low latency for various applications

**mmWave technology** used high-frequency spectrum for 5G networks

**SA (Standalone) mode** enabled 5G networks to operate independently from 4G networks

**Open RAN** technology enabled more flexibility and interoperability for mobile network operators

**C-V2X technology** enabled direct communication between vehicles and infrastructure for enhanced safety and efficiency

**6G networks** expected to start trials in some countries, offering terabit-level data speed and sub-millisecond latency

## Mobile Network

Low Energy technology reduced the consumption of wireless connections

**Unlicensed technology** used unlicensed spectrum for LTE networks

**5G NR technology** optimized LTE networks for IoT

**5G NR technology** enabled low-power wide-area networks for IoT devices

**5G networks** started to offer ultra-fast data speed and low latency for various applications

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# METHODOLOGY

Buenos días ΚΑΛΗΜΕΡΑ ΣΑΣ يخالأ حابص  
GOOD MORNING नमस्ते DZIEŃ DOBRY  
BONJOUR GOEDEMORGEN 早安 안녕하세요  
BOM DIA ДОБРОЕ УТРО Goeiemôre  
BUONGIORNO ๒๓๗๖๗๘๙ Hyvää huomenta  
Guten Morgen Günaydin SELAMAT PAGI  
Chào buổi sáng Good morgen Magandang umaga



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# 1ST MISNC 2014: KAOHSIUNG, TAIWAN



## Session Topics

- **Social Networks Issues on Sociology, Politics and Statistics**
- **Information Technology for Social Networks Analysis and Mining**
- **Social Networks for Global eHealth and Bio-medics**
- **Security, Open Data, E-Learning and Other Related Topics**
- **Intelligent Data Analysis and Its Applications**

**37 papers**

- **Shyue-Liang Leon Wang, Jason J. June, Chung-Hong Lee, Koji Okuhara, Hsin-Chang Yang: Multidisciplinary Social Networks Research - International Conference, MISNC 2014, Kaohsiung, Taiwan, September 13-14, 2014. Proceedings. Communications in Computer and Information Science 473, Springer 2014, ISBN 978-3-662-45070-3 Electronic Commerce, e-Business Management, and Social Networks**







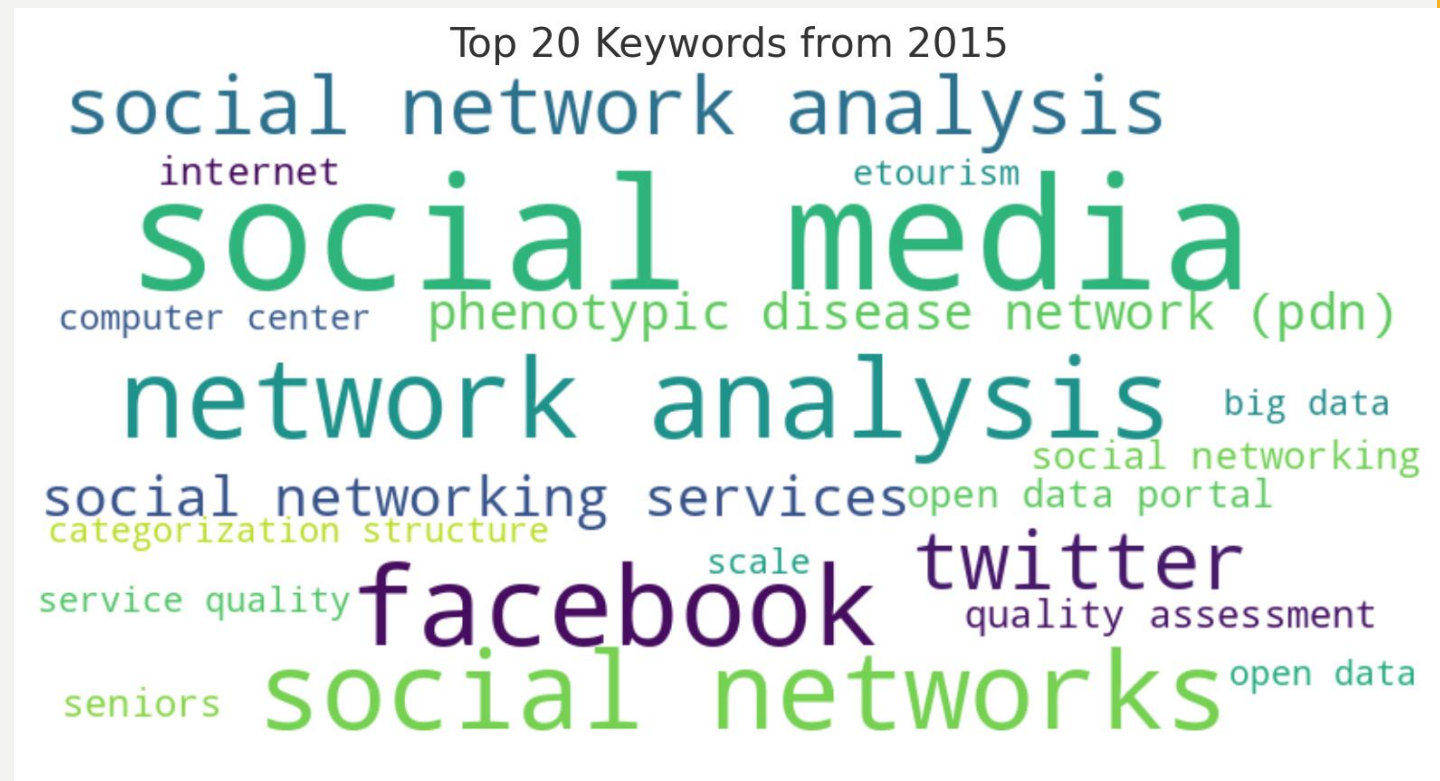






# KEYWORDS 2015

Keyword	Frequency
social media	5
network analysis	2
facebook	2
social networks	2
social network analysis	2
twitter	2
social networking services	2
phenotypic disease network (pdn)	2
social networking	1
open data portal	1
quality assessment	1
seniors	1
internet	1
categorization structure	1
computer center	1
service quality	1
open data	1
etourism	1
scale	1
big data	1





# KEYWORDS 2016

Top 20 Keywords from 2016



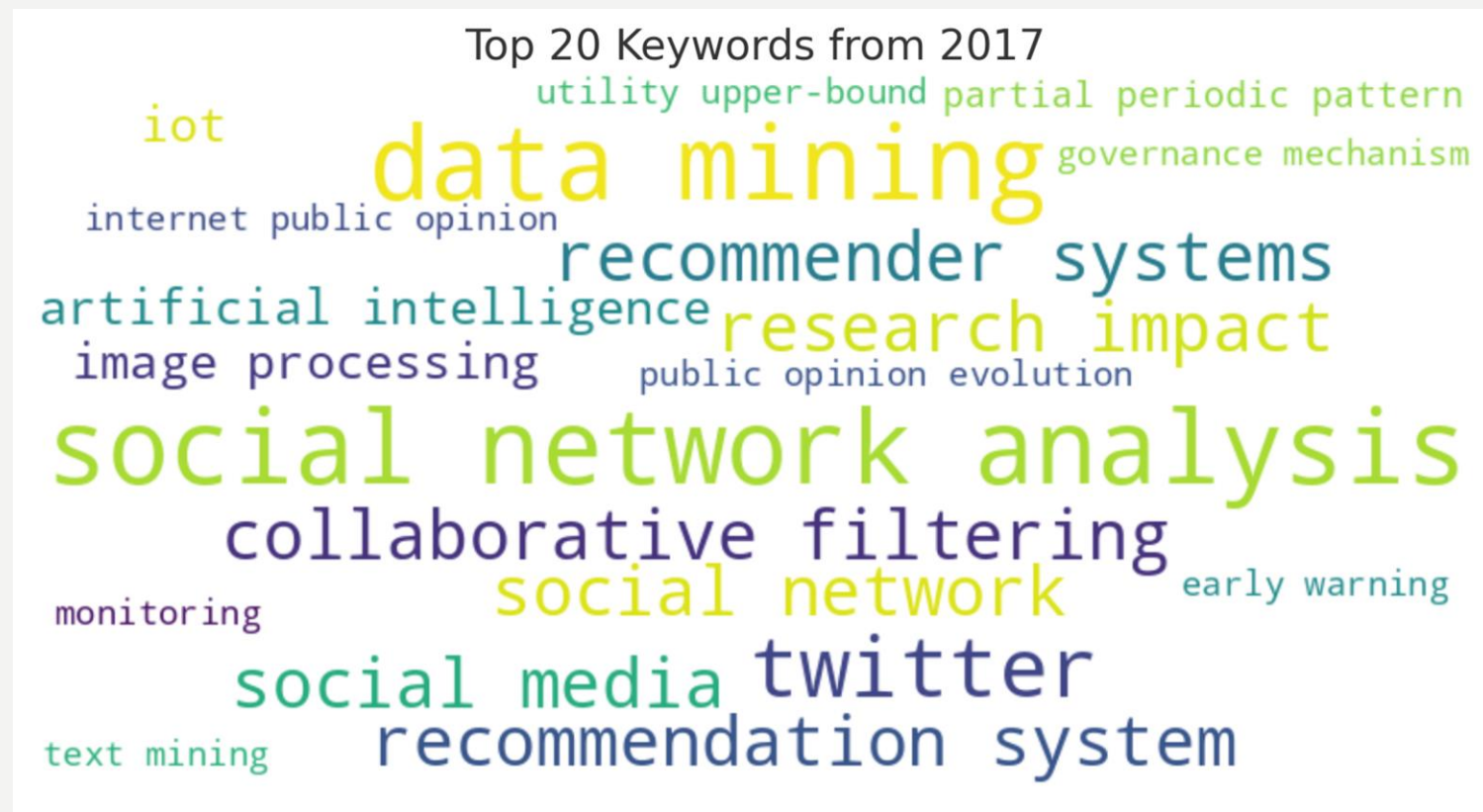
Keyword	Frequency
<b>social networks</b>	4
<b>twitter</b>	4
<b>data mining</b>	4
<b>social media</b>	3
<b>machine learning</b>	3
<b>open data</b>	3
<b>knowledge management</b>	3
<b>nlp</b>	2
<b>k-anonymity</b>	2
<b>open election data</b>	2
<b>social networking sites</b>	2
<b>natural language processing</b>	2
<b>text classification</b>	2
<b>classification</b>	2
<b>visualization</b>	2
<b>ontology</b>	2
<b>big data</b>	2
<b>taiwan election</b>	2
<b>temperature sensor</b>	1
<b>regulatory engagement theory</b>	1





# KEYWORDS 2017

Keyword	Frequency
social network analysis	5
data mining	5
twitter	3
recommender systems	2
social media	2
research impact	2
collaborative filtering	2
recommendation system	2
social network	2
artificial intelligence	2
iot	2
image processing	2
partial periodic pattern	1
internet public opinion	1
monitoring	1
public opinion evolution	1
governance mechanism	1
early warning	1
text mining	1
utility upper-bound	1

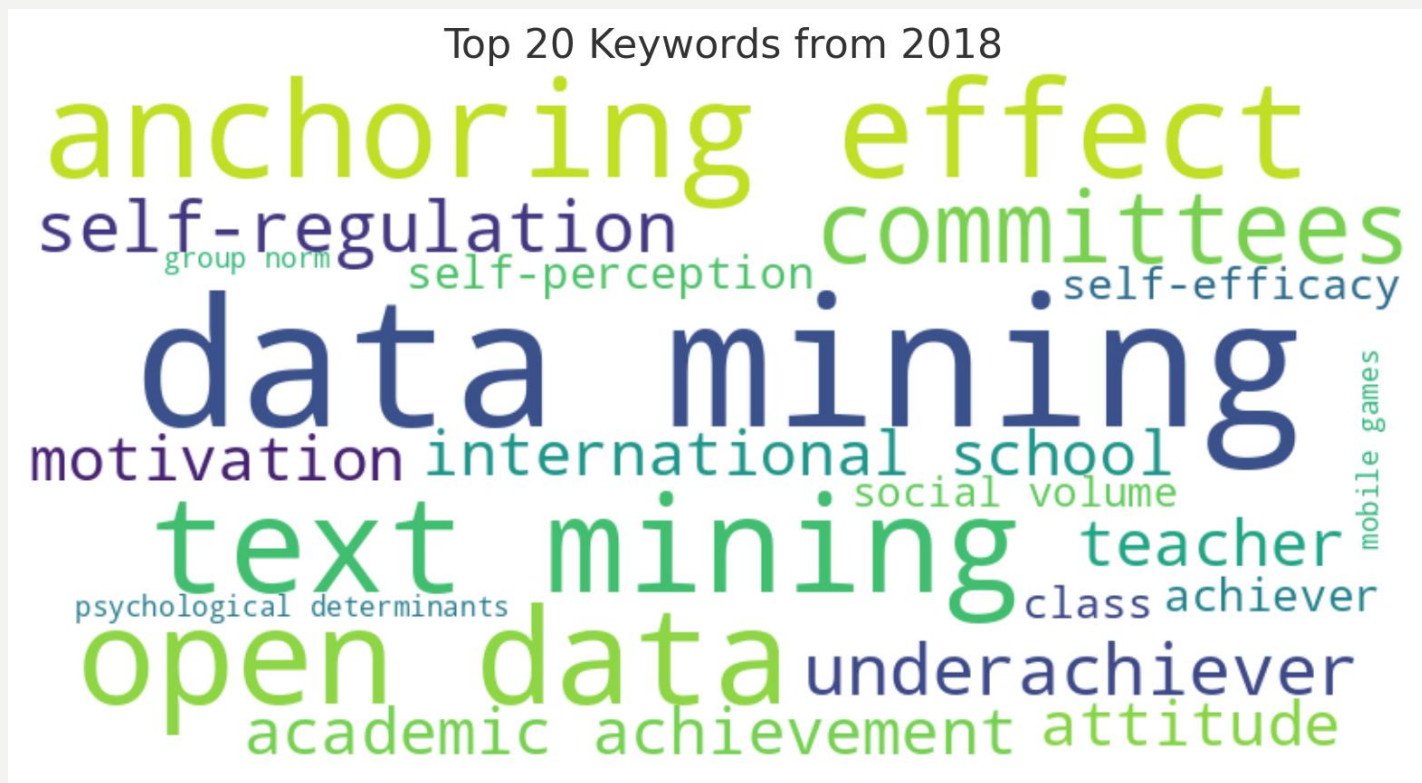






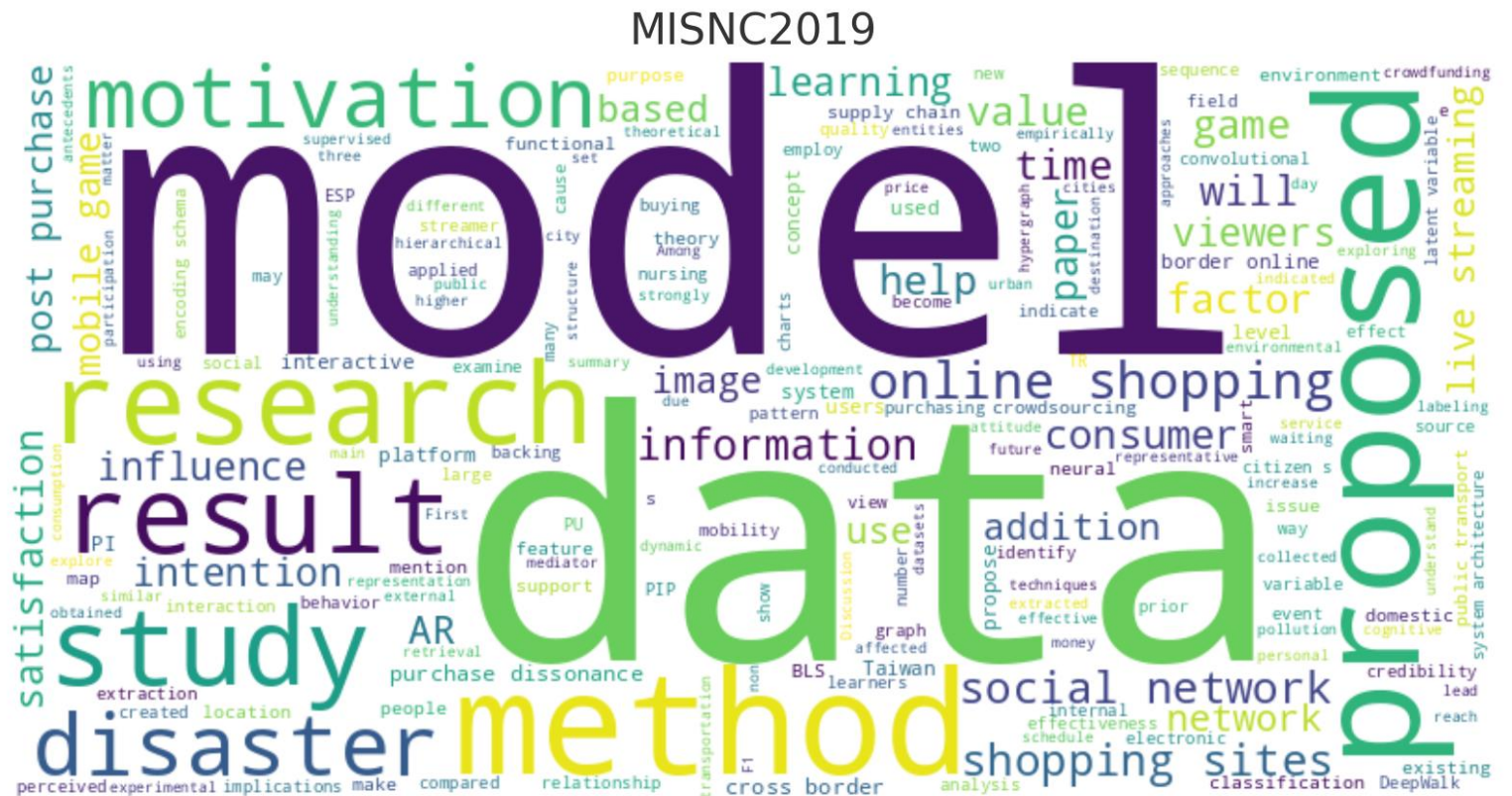
keywords	Frequency
data mining	4
text mining	2
anchoring effect	2
open data	2
committees	1
self-regulation	1
underachiever	1
academic achievement	1
teacher	1
international school	1
attitude	1
motivation	1
self-perception	1
achiever	1
self-efficacy	1
class	1
social volume	1
psychological determinants	1
group norm	1
mobile games	1

## KEYWORDS 2018



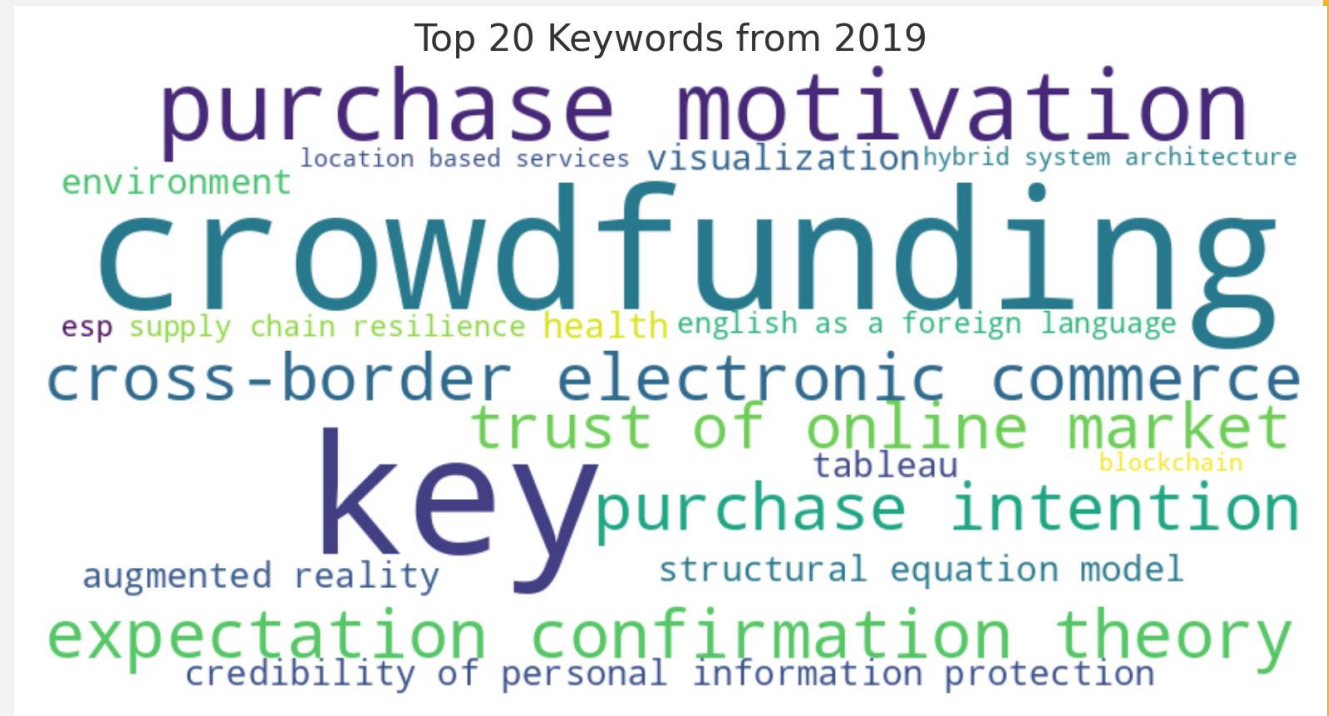
# 6TH MISNC 2019: WENZHOU, CHINA

- **Jerry Chun-Wei Lin, I-Hsien Ting, Tiffany Tang, Kai Wang:**  
**Multidisciplinary Social Networks Research - 6th International Conference, MISNC 2019, Wenzhou, China, August 26-28, 2019, Revised Selected Papers. Communications in Computer and Information Science 1131, Springer 2019, ISBN 978-981-15-1757-0 Electronic Commerce, e-Business Management, and Social Networks**
- **15 papers**



# KEYWORDS 2019

Keyword	Frequency
crowdfunding	1
esp	1
expectation confirmation theory	1
cross-border electronic commerce	1
purchase intention	1
trust of online market	1
credibility of personal information protection	1
structural equation model	1
environment	1
health	1
tableau	1
visualization	1
augmented reality	1
english as a foreign language	1
supply chain resilience	1
free to play	1
hybrid system architecture	1
blockchain	1
location based services	1
social networks	1







# KEYWORDS 2020

Keyword	Frequency
text mining	3
social media	2
loyalty	1
income inequality	1
long-term care	1
bibliometric	1
visualization analysis	1
fertility rate	1
female's labor participation	1
bayesian var	1
ecm	1
kuznets curve	1
users' loyalty	1
economic growth	1
id pos data	1
advertising value	1
uses and gratification theory	1
line official account	1
click intention	1
emotion	1

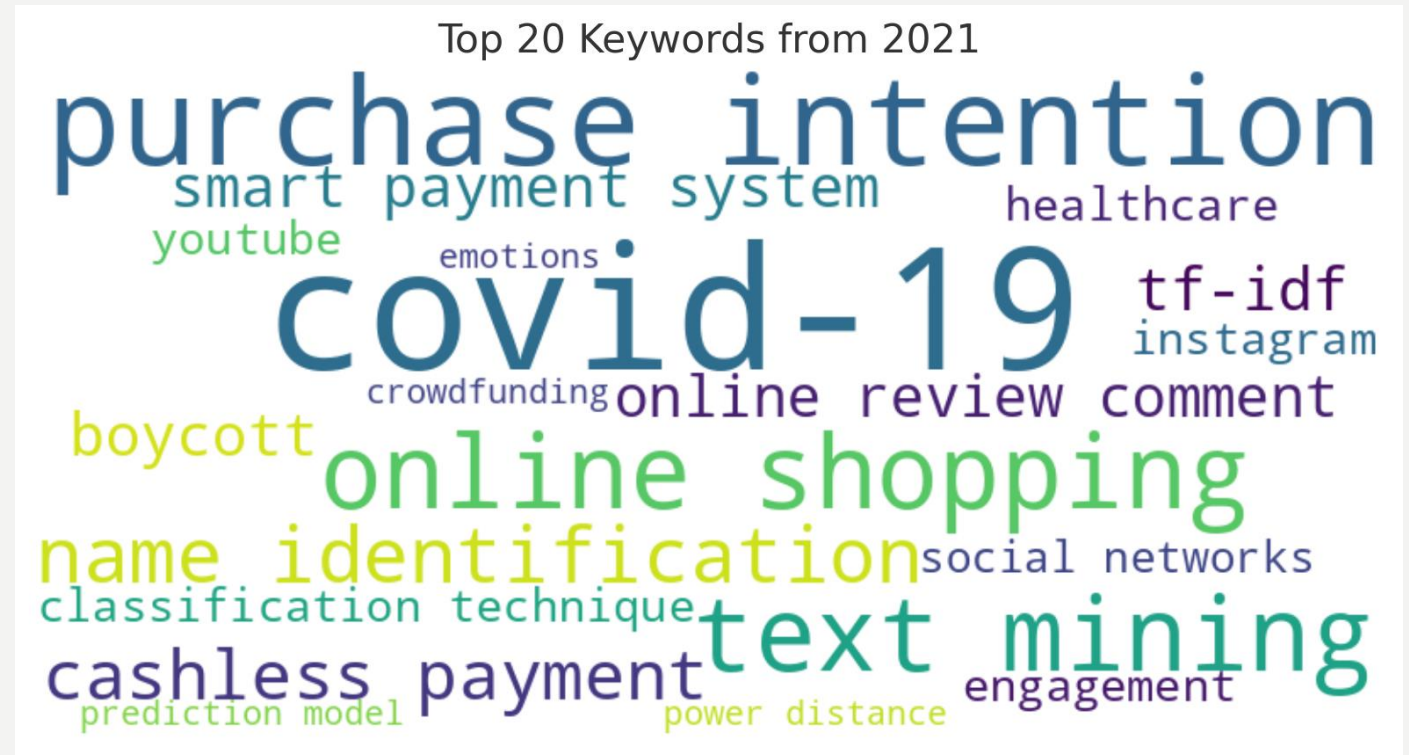






# KEYWORDS 2021

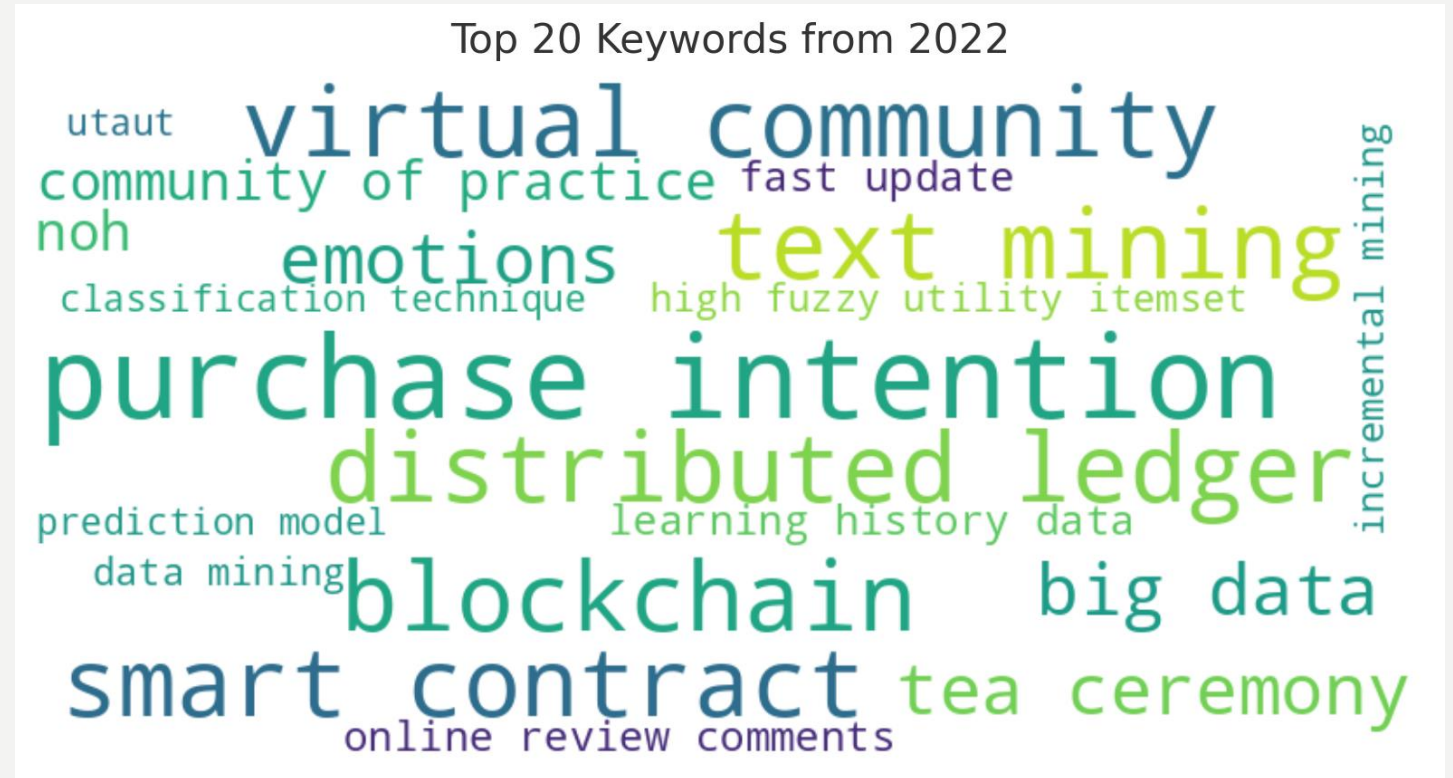
Keyword	Frequency
covid-19	3
purchase intention	3
text mining	2
online shopping	2
name identification	1
cashless payment	1
smart payment system	1
tf-idf	1
boycott	1
online review comment	1
classification technique	1
instagram	1
youtube	1
healthcare	1
engagement	1
social networks	1
prediction model	1
crowdfunding	1
power distance	1
emotions	1





# KEYWORDS 2022

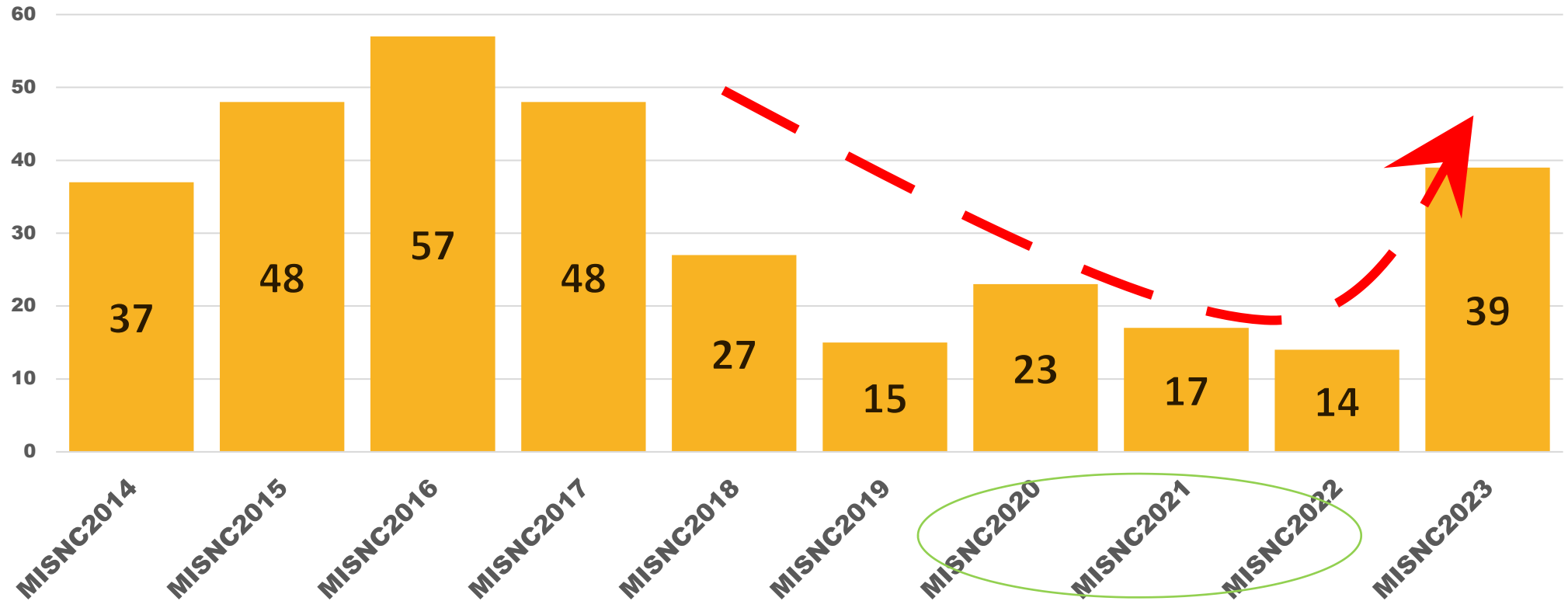
Keyword	Frequency
<b>purchase intention</b>	<b>3</b>
<b>blockchain</b>	<b>2</b>
<b>text mining</b>	<b>2</b>
<b>virtual community</b>	<b>2</b>
<b>distributed ledger</b>	<b>2</b>
<b>smart contract</b>	<b>2</b>
<b>big data</b>	<b>1</b>
<b>emotions</b>	<b>1</b>
<b>tea ceremony</b>	<b>1</b>
<b>community of practice</b>	<b>1</b>
<b>noh</b>	<b>1</b>
<b>learning history data</b>	<b>1</b>
<b>fast update</b>	<b>1</b>
<b>online review comments</b>	<b>1</b>
<b>high fuzzy utility itemset</b>	<b>1</b>
<b>data mining</b>	<b>1</b>
<b>incremental mining</b>	<b>1</b>
<b>prediction model</b>	<b>1</b>
<b>classification technique</b>	<b>1</b>
<b>utaut</b>	<b>1</b>







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**TREND OF NUMBERS  
OF PAPERS**



















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**HUGE THANKS TO  
EVERYONE WHO  
CONTRIBUTED!!**



**Special  
Thanks  
to  
Derrick**