

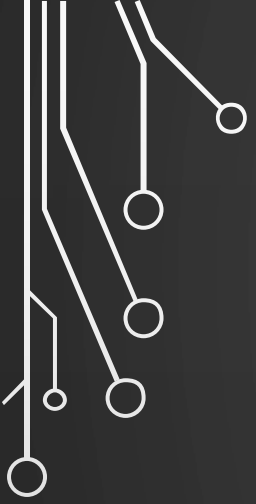


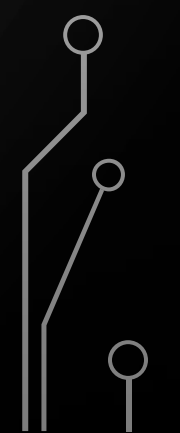


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RESEARCH ON INTERNET TRAFFIC AND CONNECTIVITY PATTERNS BETWEEN CHINA AND THE WEST

CHUN-I CHIEN

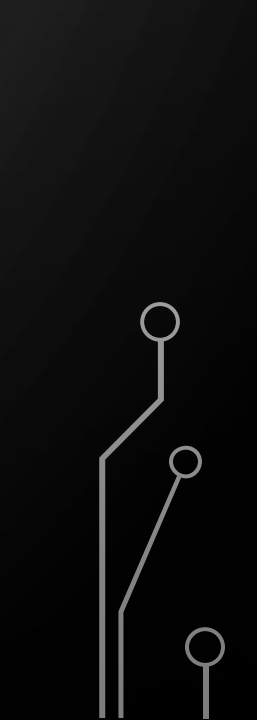


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1. RESEARCH BACKGROUND
 2. RESEARCH OBJECTIVES
 3. RESEARCH METHODOLOGY
 4. DATA ANALYSIS
 5. RESEARCH FINDINGS
 6. CONCLUSION



RESEARCH BACKGROUND

- China's Technological Rise (48% in India and China in 2022)
- Rapid Development of Internet Technologies
- Significance of Internet Traffic

Internet Traffic: the flow of data across the Internet or within specific network links of the networks that make up the Internet





RESEARCH OBJECTIVES

- Investigating Differences in Internet Traffic among Chinese and Western Applications
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RESEARCH METHODOLOGY

- Data Sources: Google Play Store and Tencent App Store
- Data Collection Period: 2018-01-01~2021-01-01
- Importance of Third-Party App Stores in China
- Data Collection Process: Deciding the target compared applications
Using Python Code to obtain required data information



WEST



CHINA



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Two version: International vs Chinese

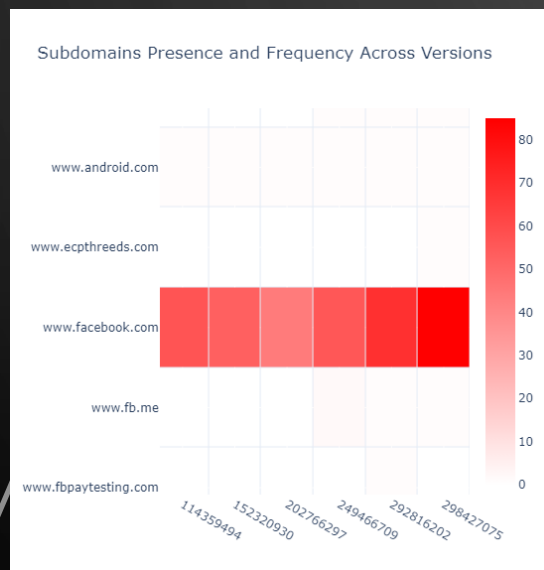


DATA ANALYSIS

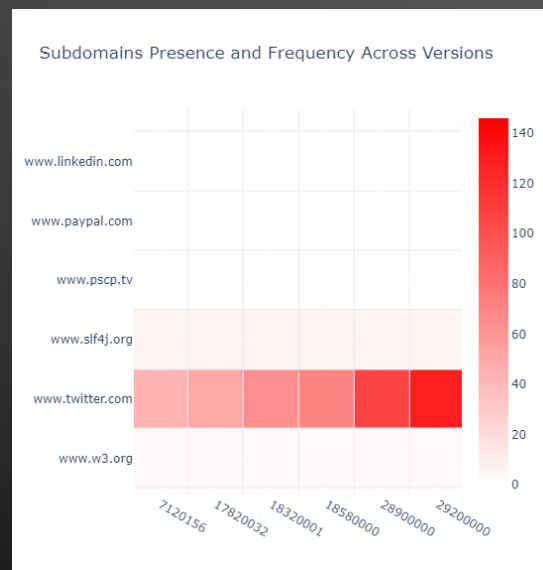
- Outputting HTML Data:
 1. the version code of the application between 2018 and 2021
 2. the subdomain of each app
 3. the exact count value of how many URLs under each subdomain
 4. the frequency: a more intense shade of red means a larger share of URLs under the subdomain
- Analyzing the Most Frequent Subdomains

RESEARCH FINDINGS

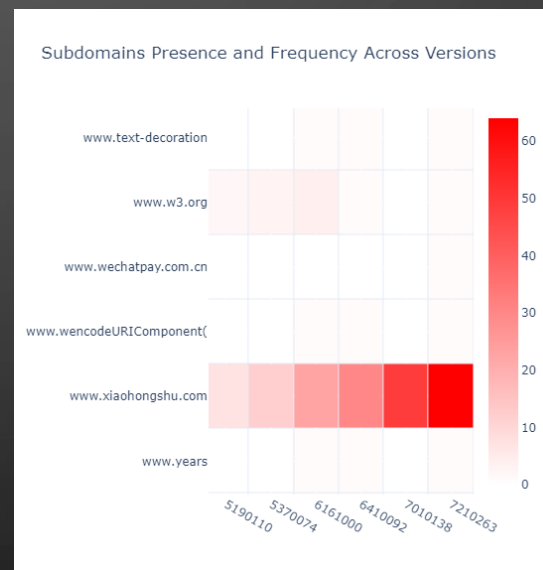
- When considering frequency as an indicator of popularity trends, overall, Facebook, Twitter, Xiaohongshu, and Zhifubao showed a trending increase in popularity from 2018 to 2021.



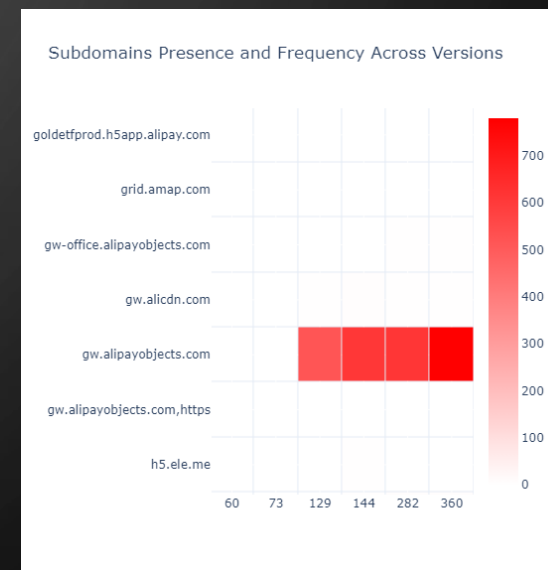
www.facebook.com



www.twitter.com



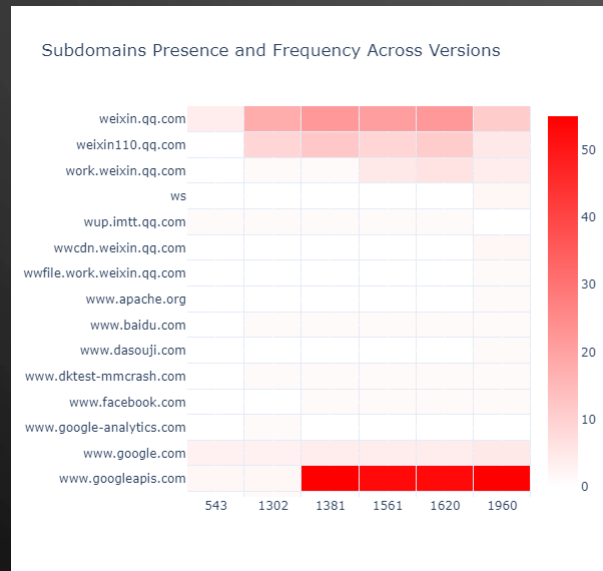
www.xiaohongshu.com



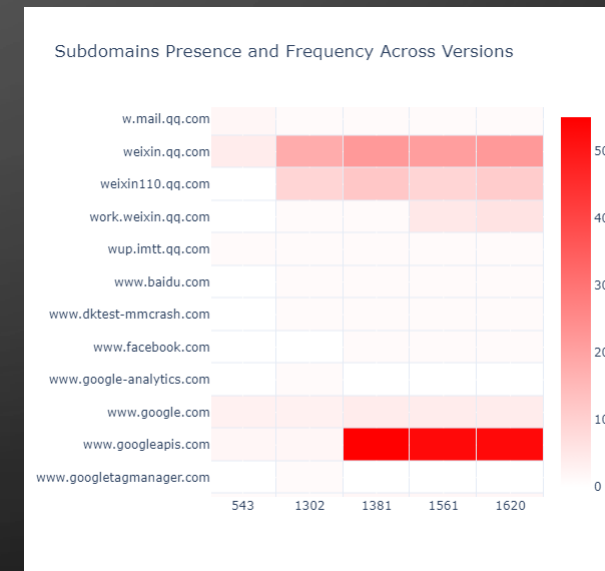
zhifubao

RESEARCH FINDINGS

- WeChat International and WeChat China(微信) versions mostly yielded consistent HTML data. The only notable difference was that the international version had an additional update version.



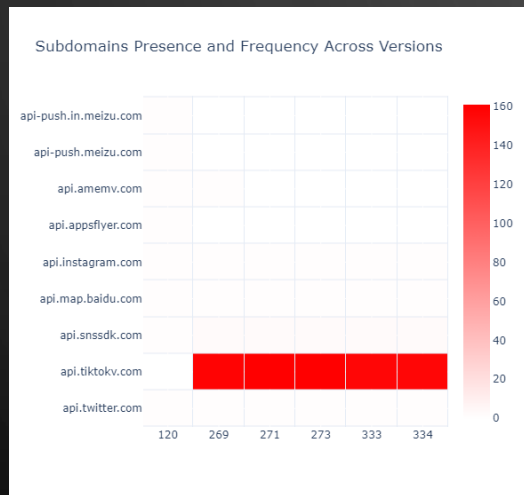
Wechat international



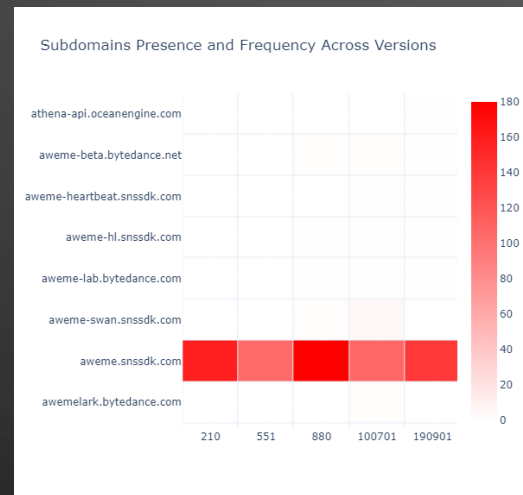
Weixin 微信
(Wechat China)

RESEARCH FINDINGS

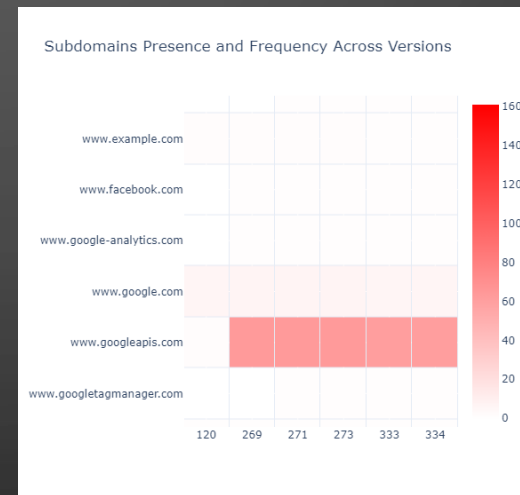
- TikTok and Douyin primarily utilize different APIs, with TikTok using a significantly higher number of Google APIs compared to Douyin.



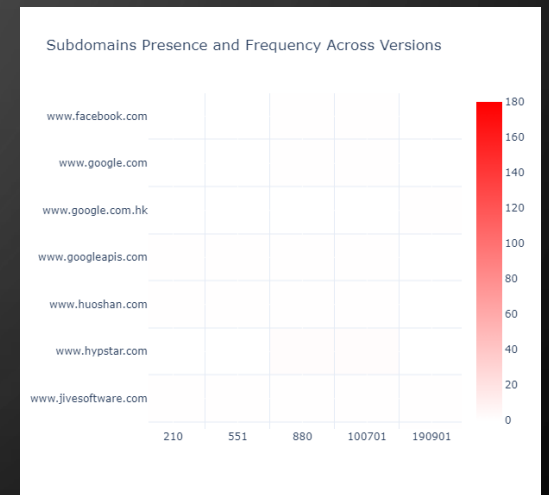
Tiktok (International)
api.tiktokv.com



Douyin (China)
aweme.snssdk.com



Tiktok (International)
www.googleapis.com



Douyin (China)
www.googleapis.com

RESEARCH FINDINGS

- Excluding TikTok and Douyin, other Chinese apps demonstrated a higher frequency and quantity of Google API usage compared to Western apps.

Facebook		Twitter			
subdomain(z value)	frequency	subdomain(z value)	frequency		
www.googleapis.com		www.googleapis.com			
5	5~10	2	0-10		
5	5~10	2	0-10		
2	0-5	2	0-10		
2	0-5	2	0-10		
2	0-5	2	0-10		
2	0-5	2	0-10		
xiaohongshu		Wechat (International)		Wechat (Chinese)	
subdomain(z value)	frequency	subdomain(z value)	frequency	subdomain(z value)	frequency
www.googleapis.com		www.googleapis.com		www.googleapis.com	
0	0	2	0-10	2	0-10
0	0	2	0-10	2	0-10
0	0	55	40-50	55	40-50
29	20-30	53	40-50	53	40-50
29	20-30	53	40-50	53	40-50
0	0	55	40-50		

- QQ's data did not reveal any significant patterns or findings.

CONCLUSION

- **Popularity Trends:** Facebook, Twitter, Xiaohongshu, and Zhifubao demonstrated increasing popularity trends from 2018 to 2021, indicating their appeal in both Chinese and Western markets.
- **WeChat Consistency:** WeChat International and WeChat China versions showed data consistency, with the international version featuring more frequent updates. This suggests WeChat's maintenance of similar connectivity patterns globally and domestically.
- **TikTok vs. Douyin:** TikTok and Douyin employed different APIs, with TikTok relying heavily on Google APIs. This underscores significant technological distinctions catering to varied markets and demographics.
- **Google API Usage:** Except for TikTok and Douyin, other Chinese apps surpassed Western apps in both frequency and quantity of Google API usage, reflecting differing degrees of reliance on the global internet ecosystem.
- **QQ's Performance:** QQ's data yielded no discernible patterns, warranting further in-depth research into its internet traffic and connectivity patterns.

The image features a dark gray background with a subtle radial gradient. In the four corners, there are white, stylized circuit board traces. These traces consist of straight lines of varying lengths and angles, some terminating in small open circles, resembling electronic components or connectors. The top-left and bottom-left corners have more complex, branching patterns, while the top-right and bottom-right corners have simpler, more linear traces.

THANK YOU FOR LISTENING