

Cybersecurity in the News, 2019-2026: Attention, Geography and Tone of Global Cybersecurity Coverage, and How It Compares with Research and Invention

Fliar BI · Prism Research Layer · Working paper, October 2026 · Dataset and code: github.com/fliarbi/prism-news-api · Licence CC BY-NC 4.0

Abstract

We measure how cybersecurity was covered in a global news index from January 2019 to July 2026, using 404,459 de-duplicated articles about cybersecurity, cyberattacks, ransomware and data breaches, and set that coverage beside 37,051 research papers and 2,792 patent families on the same subject. Six results stand out:

1. **Rising attention.** Cybersecurity's share of news rose 1.42-fold, from 20.52 articles per 10,000 in 2019 to 29.22 in 2025. The largest annual step came in 2021, a rise of 37.7%.
2. **Event months.** May 2021, the month of the Colonial Pipeline ransomware attack, reached 39.21 per 10,000. July 2024, the month of the CrowdStrike-related IT outages, reached 44.68, the highest reliable monthly value.
3. **Geography.** The United Kingdom's share of located cybersecurity news is 1.74 times its share of all news. The United States, the largest source (41.69%), is slightly under-represented at 0.86, and India at 0.66. Among countries with at least a thousand located articles, Singapore (3.45), Israel (2.19) and the United Arab Emirates (1.98) are the most over-represented; North Korea, on a small baseline, reaches 17.06. Within India, Karnataka (3.04) and Telangana (2.95) lead; within the United States, Maine (3.73), Virginia (3.06) and Nevada (2.65), once three place-tagging artefacts are set aside.
4. **Tone and urgency.** From January 2023 to July 2026, 43.8% of cybersecurity articles are negative in tone (all news: 33.6%), yet 55.5% are positive, close to the 56.8% of all news. 76.7% are rated critical priority (all news: 42.6%).
5. **Shifting attention.** Between 2023 and 2025, cybersecurity's share of the United Kingdom's news rose 1.25 times and Ghana's 1.9 times, while it fell most in Ireland, Canada and Israel, and also fell in the United States.
6. **Research and invention.** Cybersecurity papers grew from 1.39 to 12.2 per 10,000 papers between 2015 and 2025 (8.8-fold). Patent families published per year grew 13.8-fold from 2015 to 2024, from a small base, and the United States office held 50.1% of family-office filings.

Findings stated for citation

- **F1.** Cybersecurity's share of news rose from 20.52 (2019) to 29.22 (2025) articles per 10,000, a 1.42-fold increase.
- **F2.** The share rose 37.7% from 2020 to 2021, the largest annual change; May 2021 reached 39.21 per 10,000.

- **F3.** July 2024 was the leading month at 44.68 per 10,000 (March 2025 set aside as an ingestion artefact).
- **F4.** 43.8% of cybersecurity articles were negative in tone, 1.3 times the all-news share.
- **F5.** 76.7% received a machine-assigned critical priority rating, 1.8 times the all-news share.
- **F6.** Ransomware attack vectors appeared in 5.02% of themed articles, 296.97 times their rate in all news.
- **F7.** "Data breach" opened 20,274 articles and "data breaches" 11,776.
- **F8.** The United States held 41.69% of located cybersecurity news (lift 0.86), the United Kingdom 10.13% (1.74) and India 8.67% (0.66).
- **F9.** Among countries with at least a thousand located articles, Singapore (3.45), Israel (2.19), the United Arab Emirates (1.98), Ukraine (1.97) and Russia (1.91) were the most over-represented; North Korea (597 articles) reached 17.06.
- **F10.** Within India, Karnataka (3.04), Telangana (2.95) and Maharashtra (1.53) had the most over-represented coverage; Uttar Pradesh (0.44), West Bengal (0.49) and Uttarakhand (0.63) the least.
- **F11.** Within the United States, Maine (3.73), Virginia (3.06) and Nevada (2.65) had the most over-represented reliably tagged coverage; New Jersey (0.12) and North Dakota (0.48) the least.
- **F12.** Cybersecurity's share of UK news rose 1.25 times from 2023 to 2025; it fell in the United States and Canada.
- **F13.** In China, 71.2% of cybersecurity articles were negative, 2.6 times the country's baseline.
- **F14.** Cybersecurity papers rose 8.8-fold as a share of all papers between 2015 and 2025.
- **F15.** Cybersecurity patent families published per year grew 13.8-fold between 2015 and 2024, from 41 to 566.

1. Introduction

Cybersecurity has moved from a specialist subject to a regular item of general news. Attacks on hospitals, pipelines and retailers now disrupt daily life, and governments treat digital security as part of national security. Incident databases record breaches and attacks. Bibliometric studies record research. Few sources record attention: how much of the news cybersecurity takes, and when, where and in what tone.

This paper and its dataset measure that attention. They combine three records for one topic: a global news index, research papers and patents. Each comparison uses a denominator, so that growth in the index or in publishing is not mistaken for growth in interest. The companion dataset publishes an article-level sample (50,714 rows) and full coverage tables, so every figure here can be re-derived. The [Prism News API](#) serves the full history.

2. Data and methods

News. The Prism news index holds articles from outlets worldwide; non-English articles are indexed in English translation. Each article carries its opening text (the first few sentences), a primary location, a graded tone label, a machine-assigned priority rating (1–9), themes, keywords and named organisations. We count unique article identifiers; repeated rows for

the same article are removed. When this release was built, 92.88% of the index was readable, so all counts are lower bounds.

Matching. An article is about cybersecurity when its opening text contains, as whole words, *cybersecurity* (or *cyber security*, *cyber-security*), *cyberattack(s)*, *cyber attack(s)*, *cyber-attack(s)*, *ransomware*, *cyber threat(s)*, *data breach* or *data breaches*. Five families of matches are excluded:

- job advertisements ("about the role", "years of experience");
- market-size reports ("CAGR", "forecast period");
- degree and course listings;
- stock-price and analyst-rating items;
- service pages of one testing and certification company, which the index holds in many copies.

Together these removed 6,292 of 410,751 raw matches (1.53%). One reviewer read 40 randomly drawn matched openings. 37 were about digital security, meaning attacks, breaches, ransomware, defence, policy or the security industry (precision 92.5%). In 31 (77.5%) cybersecurity was the main subject. The three false positives were a data-storage product release, a physical crime story quoting a security expert, and a stock profile of a defence company.

Measures. Coverage over time is expressed per 10,000 articles in the index that month or year, because the index grew from 11,807,177 articles in 2019 to 26,990,006 in 2025. Seasonality uses each year's within-year month shares, averaged over the complete years 2019–2025. Geography, tone, priority and themes use January 2023 – July 2026. Geography is expressed as lift: a country's share of cybersecurity articles divided by its share of all located articles. State lift uses the same ratio within India and within the United States. Place tags derived from ordinary words (such as "Congress", "Earth", "Winter", "Cloud", "Mobile" and "Hurricane"; 714 words in all) were treated as unlocated in every location field, which removed 15.3% of city-tagged articles.

Research and patents. Research papers are de-duplicated articles and reviews (2000–2025) with a cybersecurity term in the title (*cybersecurity*, *cyber security*, *cyberattack*, *ransomware*, *cyber threat* or *data breach*, with plurals). Repository deposits are excluded. Patent families (2005–2024) use the same title rule without "data breach", and are counted once per filing office.

3. Results

3.1 How much and when

The index holds 404,459 cybersecurity articles from January 2019 to July 2026. Raw counts rose from 24,227 in 2019 to 78,852 in 2025. Part of that rise is growth of the index itself. As a share of all news, cybersecurity rose from 20.52 per 10,000 in 2019 to 30.57 in 2024 and 29.22 in 2025, a 1.42-fold increase over 2019 (Table 1). The largest step was from 2020 (20.57) to 2021 (28.33), a rise of 37.7%. Since 2021 the share has stayed between 26.53 and 30.57.

Year	Cybersecurity articles	All articles in index	Per 10,000
2019	24,227	11,807,177	20.52
2020	33,391	16,230,014	20.57
2021	48,951	17,281,220	28.33
2022	50,720	19,115,515	26.53
2023	59,945	20,484,506	29.26
2024	71,263	23,311,896	30.57
2025	78,852	26,990,006	29.22

Table 1. Cybersecurity articles per year and as a share of the index. 2026 (January-July) is partial and omitted. Monthly values show single events (Figure 1). May 2021, the month of the Colonial Pipeline ransomware attack, reached 39.21 per 10,000. July 2024, the month of the CrowdStrike-related IT outages, reached 44.68. March 2025 has the highest value in the series (46.25), but most of it falls on a single day, 19 March 2025, when the index took in many repeated copies of older pages under new identifiers. We therefore do not treat March 2025 as a peak of attention.

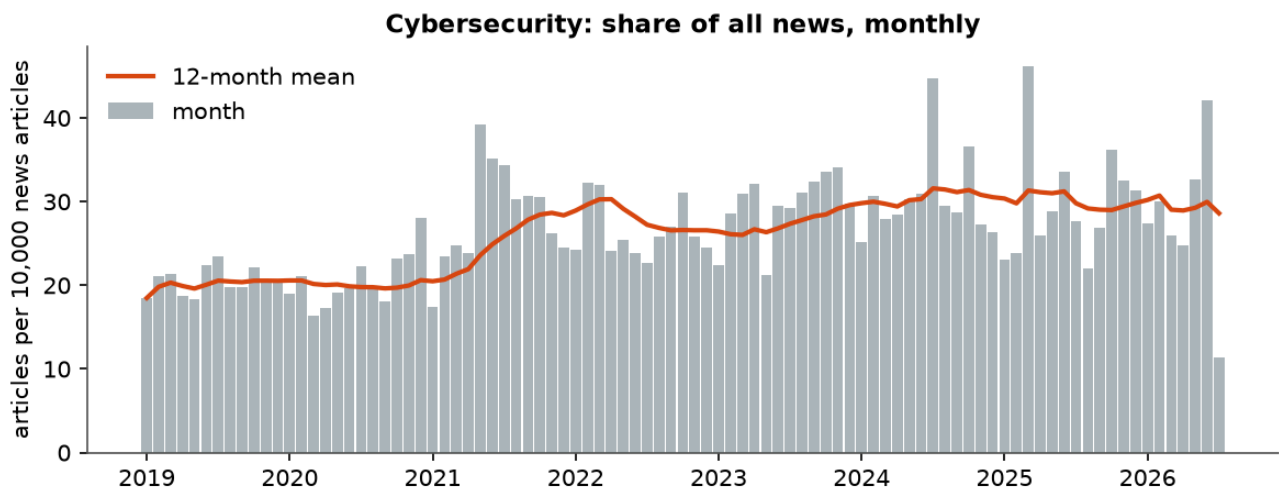


Figure 1. Cybersecurity coverage as articles per 10,000 news articles, monthly, January 2019 – July 2026. Bars are months; the line is the 12-month mean. March 2025 is inflated by repeated pages taken in on one day.

Unlike weather hazards, cybersecurity has little seasonality (Figure 2). October, the month of many national cybersecurity awareness campaigns, holds the largest share of a typical year (9.53%), followed by March (9.16%) and July (9.11%). April (7.42%) and January (7.46%) are the quietest months. The spread is narrow around an even one-twelfth per month.

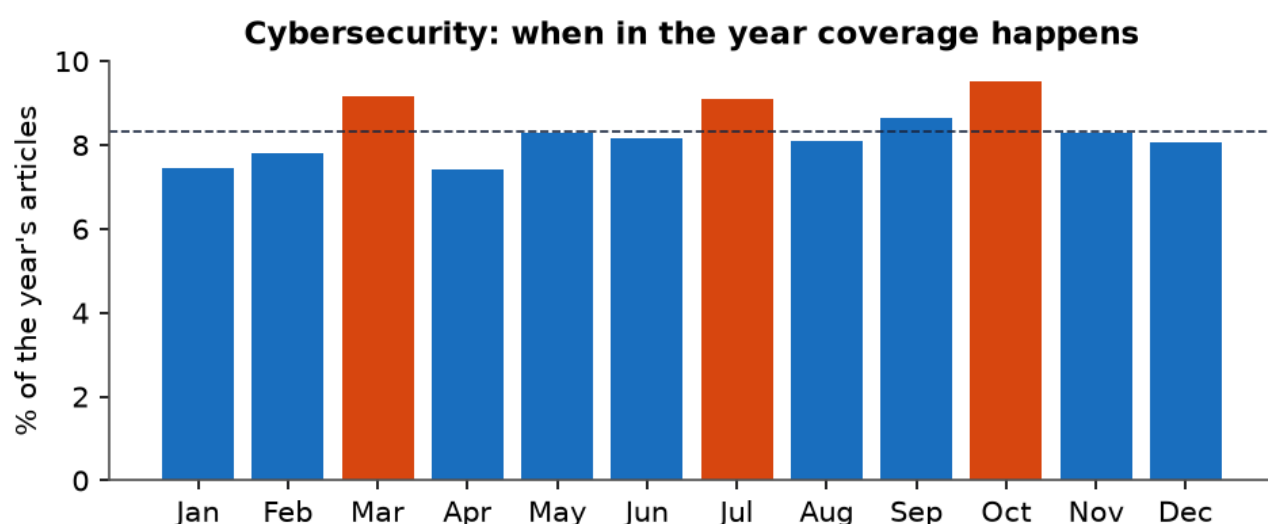


Figure 2. Share of each year's cybersecurity articles published in each month, averaged over 2019–2025. Dashed line = an even spread.

3.2 Where

Between January 2023 and July 2026, 95,476 cybersecurity articles carried a primary location. The United States holds the largest raw share (41.69%), but its lift is 0.86: cybersecurity takes a slightly smaller share of American news than of news overall. The United Kingdom (10.13%, lift 1.74) is over-represented. India (8.67%) has a lift of only 0.66. Among countries with at least a thousand located articles, Singapore (3.45), Israel (2.19), the United Arab Emirates (1.98), Ukraine (1.97) and Russia (1.91) stand out (Table 2, Figure 3).

Country	Located cybersecurity articles	Share %	Lift vs all news
United States	39,801	41.69	0.86
United Kingdom	9,676	10.13	1.74
India	8,281	8.67	0.66
Australia	3,388	3.55	1.66
Singapore	2,936	3.08	3.45
China	2,887	3.02	1.15
Canada	1,706	1.79	0.83
Japan	1,404	1.47	1.38
France	1,395	1.46	0.74
Germany	1,393	1.46	1.24
Russia	1,372	1.44	1.91
United Arab Emirates	1,234	1.29	1.98
Israel	1,170	1.23	2.19
Ukraine	1,008	1.06	1.97
North Korea	597	0.63	17.06

Table 2. Leading countries in located cybersecurity news, January 2023 – July 2026, with lift against all located news.

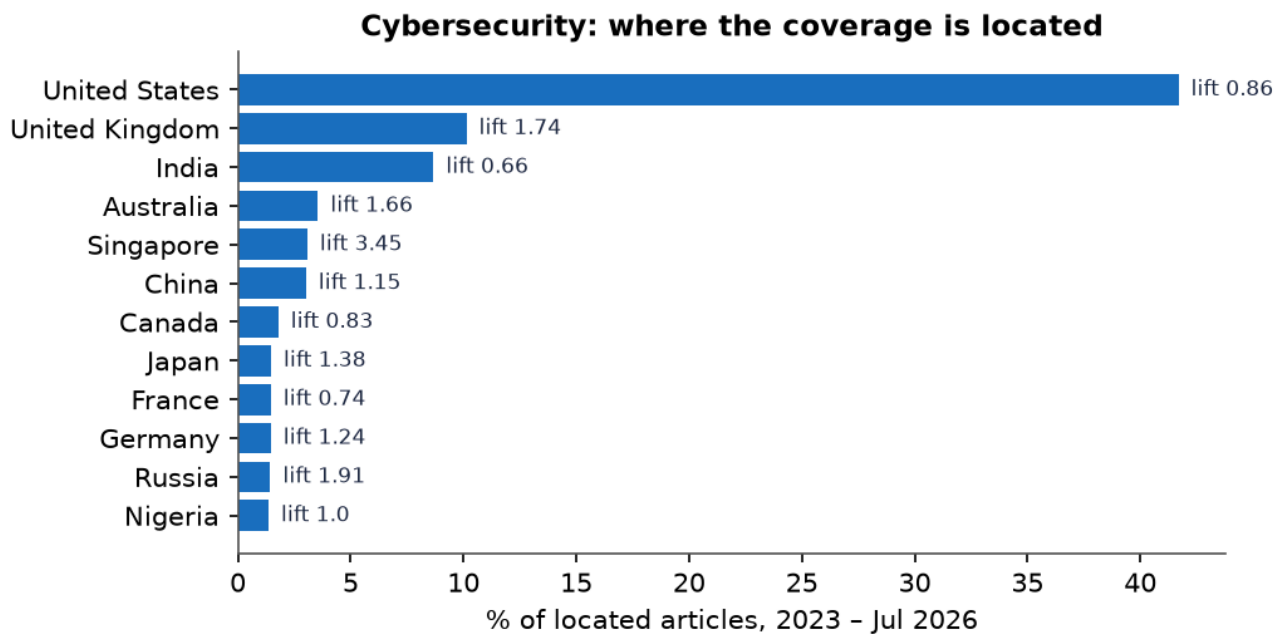


Figure 3. Leading countries by share of located cybersecurity articles, 2023 – Jul 2026, labelled with lift against all located news.

3.3 Geo intelligence: continents, states and shifting attention

The world map (Figure 4) shows the pattern at a glance. Cybersecurity is over-represented in the news of the United Kingdom, Finland, Poland, Russia, Ukraine, Israel, Iran, the United Arab Emirates, Saudi Arabia, Oman, Taiwan, Singapore, Australia and New Zealand. Serbia (6.32), Venezuela (5.24) and the Netherlands (3.13) also show high lifts on the map, but most of their sample rows are place tags read from other words: "Nis" (the European Union's NIS2 directive read as the Serbian city), "Falcon" (a security product read as the Venezuelan state) and "Erp" and "Oss" (ERP and open-source software read as Dutch towns). We set them aside. It is under-represented in India, Pakistan, Bangladesh, Mexico, Brazil, Italy and Portugal. Mexico (0.47) has the lowest lift among countries with enough articles to map, and Bangladesh (0.57), Italy (0.58) and Portugal (0.58) are among the lowest. North Korea has the highest lift (17.06), on a small baseline of news located there. By continent, Oceania (1.63) and Europe (1.34) are over-represented, Africa (1.04), South America (1.0) and Asia (0.99) are close to parity, and North America (0.84) is under-represented (Figure 7, left).

Cybersecurity: which countries over- and under-cover the topic

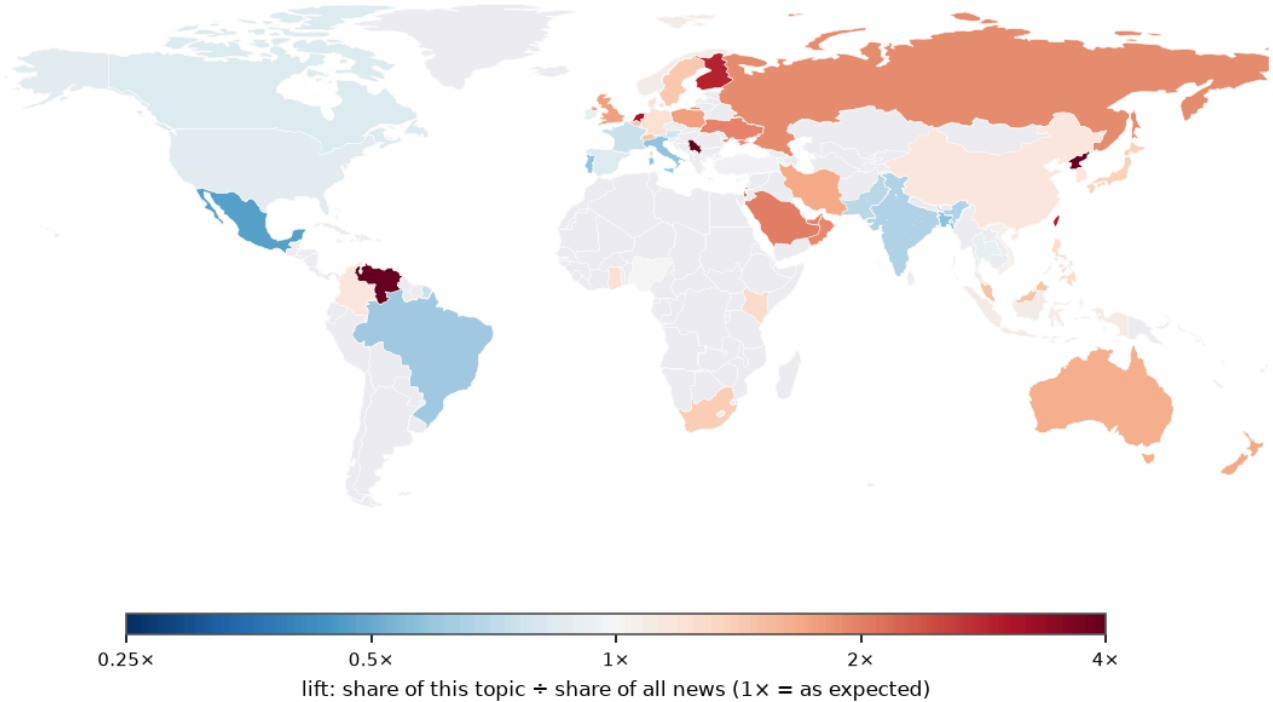


Figure 4. Lift of each country's share of located cybersecurity articles, January 2023 – July 2026 (red = over-represented, blue = under-represented, grey = too few articles). India is drawn with its official outline.

Within countries, the picture is sharper (Table 3). Measured against each state's share of Indian news, Karnataka (3.04) and Telangana (2.95) are the most over-represented. In the sample their articles are tagged mostly to Bengaluru and Hyderabad, the centres of India's two largest technology industries. Maharashtra (1.53) and Gujarat (1.28) follow. Among states with at least 50 articles, Uttar Pradesh (0.44), West Bengal (0.49) and Uttarakhand (0.63) are the most under-represented (Figure 5). Delhi, with 393 articles, sits below parity at 0.86.

In the United States, Connecticut (5.88) and Alabama (2.57) rank high by lift, but their sample rows show tagging artefacts. Most Connecticut-tagged articles are placed in "Sharon" because a personal name in a repeated text was read as the town, and most Alabama-tagged articles are placed in "Dora", which is the European Union's Digital Operational Resilience Act (DORA). We set both aside. Among the remaining states, Maine (3.73), Virginia (3.06) and Nevada (2.65) lead by lift, followed by Maryland (1.71), Massachusetts (1.68) and Rhode Island (1.67). Washington (2.05) is also set aside: fewer than a third of its sample rows are placed in the state's own cities (Seattle, Redmond), and most of the rest refer to the federal capital. Many Maine-tagged articles are reports of breaches at national companies that name Maine. Virginia's are tagged to Reston, McLean and Arlington, and Nevada's mostly to Las Vegas. Among states with at least 50 articles, New Jersey (0.12), North Dakota (0.48) and Pennsylvania (0.53) are furthest below their weight in American news (Figure 6). California has the most articles (4,052) at a lift of 1.57.

India: state	Articles	Lift	United States: state	Articles	Lift
Karnataka	594	3.04	Maine	415	3.73
Telangana	362	2.95	Virginia	776	3.06
Maharashtra	856	1.53	Nevada	703	2.65
Gujarat	149	1.28	Maryland	451	1.71
Kerala	83	0.97	Massachusetts	1,031	1.68
Andhra Pradesh	71	0.88	Rhode Island	67	1.67
<i>Lowest: Uttarakhand</i>	50	0.63	<i>Lowest: Pennsylvania</i>	820	0.53
West Bengal	60	0.49	North Dakota	58	0.48
Uttar Pradesh	195	0.44	New Jersey	601	0.12

Table 3. States with the highest and lowest lift in cybersecurity coverage, January 2023 – July 2026. Lift = the state's share of the country's located cybersecurity articles ÷ its share of all located news from that country. States with fewer than 50 articles are omitted, as are Connecticut, Alabama and Washington, whose lifts are place-tagging artefacts.

Cybersecurity: states of India by lift

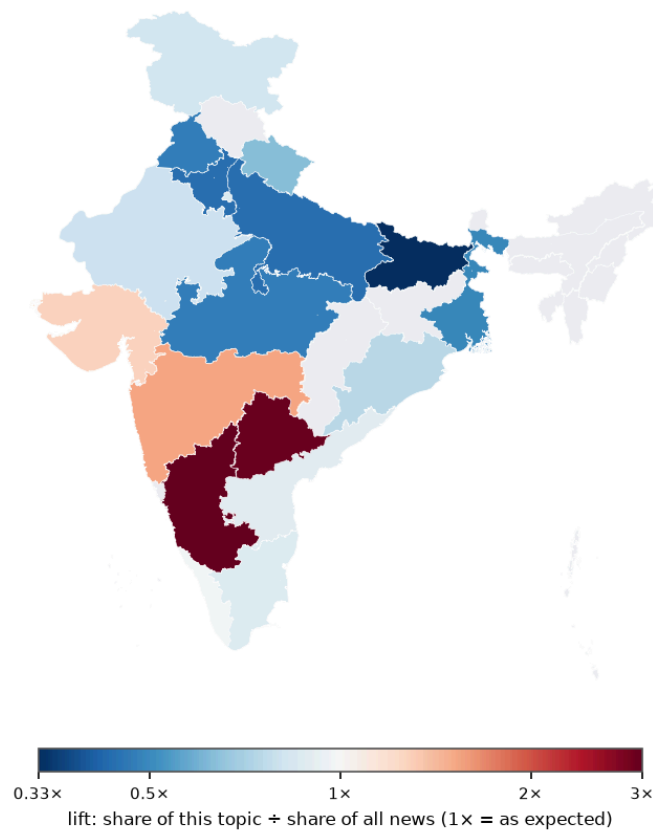


Figure 5. Lift of each Indian state's share of located cybersecurity articles against its share of all located Indian news, January 2023 – July 2026. Official outline; Ladakh is drawn within Jammu and Kashmir in the boundary file used.

Cybersecurity: states of United States by lift

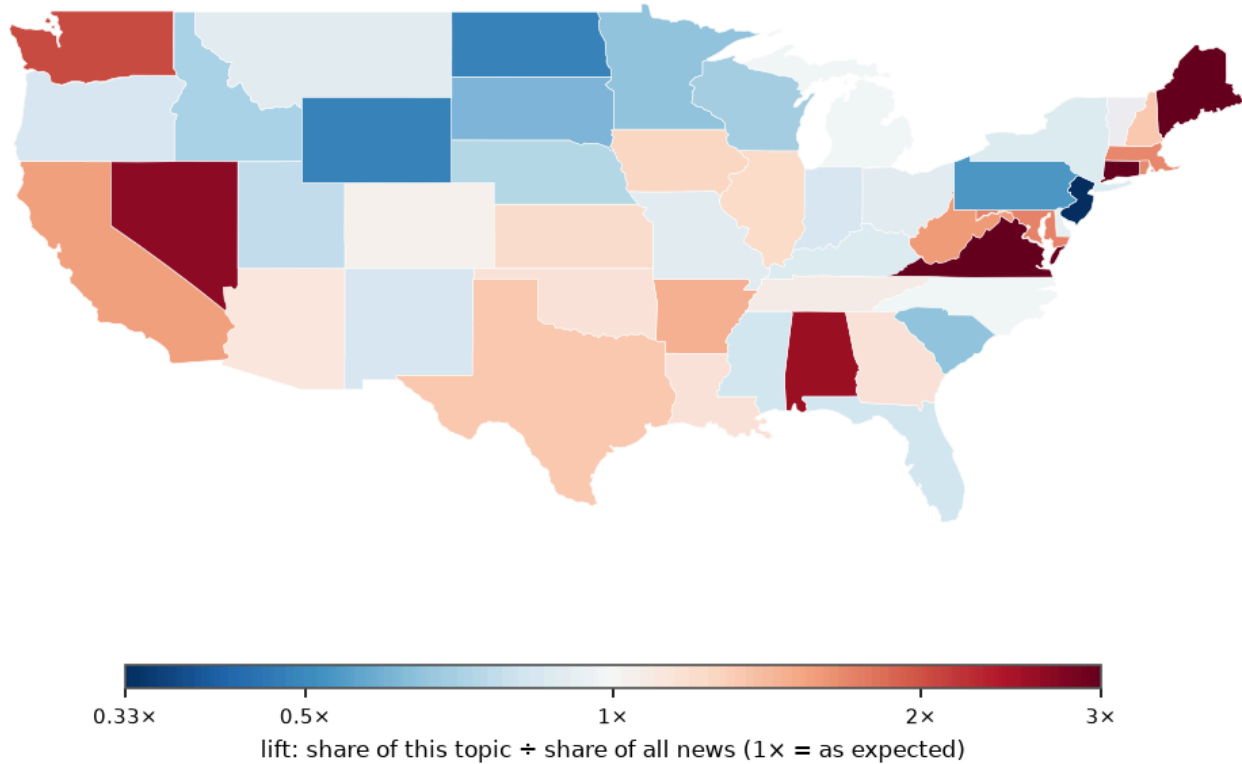


Figure 6. Lift of each US state's share of located cybersecurity articles against its share of all located US news, January 2023 – July 2026.

Attention also moves between countries from year to year (Figure 7, right). Measured as cybersecurity articles per 10,000 of each country's located news, the United Kingdom rose from 38.78 in 2023 to 48.47 in 2025 (1.25 times). Larger relative rises came in Ghana (1.9 times), Spain (1.86), South Africa (1.81), Germany (1.44), South Korea (1.36) and Singapore (1.31); North Korea also rose (1.5) on a small baseline. India rose steadily, from 8.62 in 2019 to 17.82 in 2025. Attention fell in Canada (from 27.25 to 14.43, 0.53 times), Israel (0.61), Italy (0.67), France and China (0.76 each), New Zealand (0.83), Switzerland (0.84) and the United States (from 21.37 to 18.55). Ireland fell furthest (0.29 times), but its series is small and swings sharply between years. Single-country series are volatile: the United States share in January–July 2026 (23.66) was back above its 2023 level.

Tone also differs by country, measured against each country's own news (Table 4). Cybersecurity coverage located in China is far more negative than Chinese news overall (71.2% against 27.2%, 2.6 times), as is coverage located in South Korea (65.7% against 25.0%) and Japan (46.4% against 23.3%). In Israel the pattern reverses: 27.8% of cybersecurity articles are negative against 73.2% of Israeli news. India's coverage (35.2%) is also less negative than Indian news overall (41.2%).

Country	Labelled articles	Negative % (cybersecurity)	Negative % (all news of the country)
United States	39,763	50.1	33.1
United Kingdom	9,661	57.4	36.9
India	8,274	35.2	41.2
China	2,884	71.2	27.2
Japan	1,404	46.4	23.3
Russia	1,368	89.0	72.1
Israel	1,169	27.8	73.2
South Korea	671	65.7	25.0

Table 4. Negative share of cybersecurity articles by primary country against the negative share of all news from that country, January 2023 – July 2026.

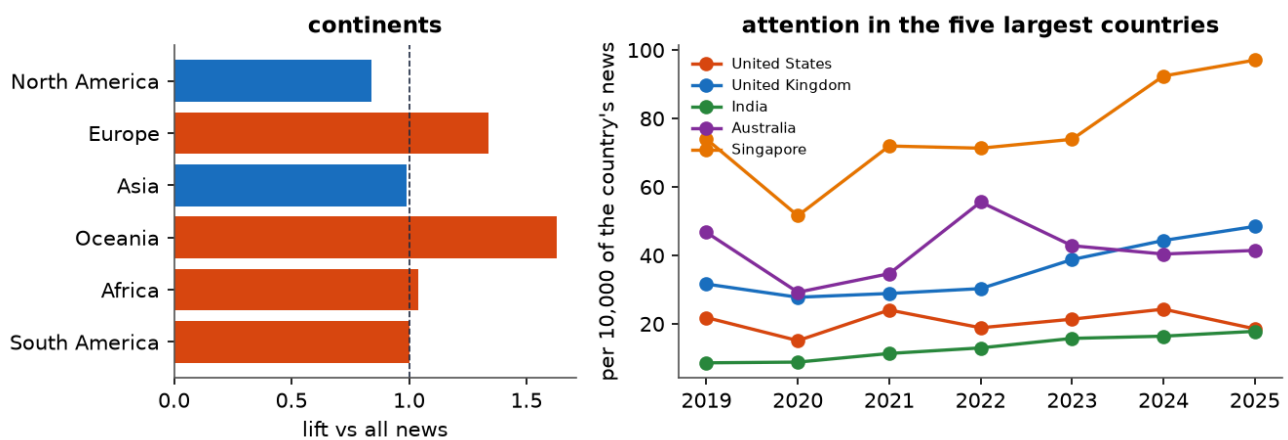


Figure 7. Left: lift by continent, January 2023 – July 2026. Right: cybersecurity articles per 10,000 of each country's located news, 2019–2025, for the five countries with the most articles.

3.4 Tone, urgency and themes

Cybersecurity coverage is more negative and more often rated urgent than news in general (Figure 8). Among articles with a tone label, 43.8% are negative, against 33.6% across the index (1.3 times). 55.5% are positive, close to the 56.8% of all news; product launches, funding rounds and partnerships are common among the positive articles. The machine-assigned priority rating puts 76.7% of cybersecurity articles at critical level (7 or higher), against 42.6% of all news (1.8 times).

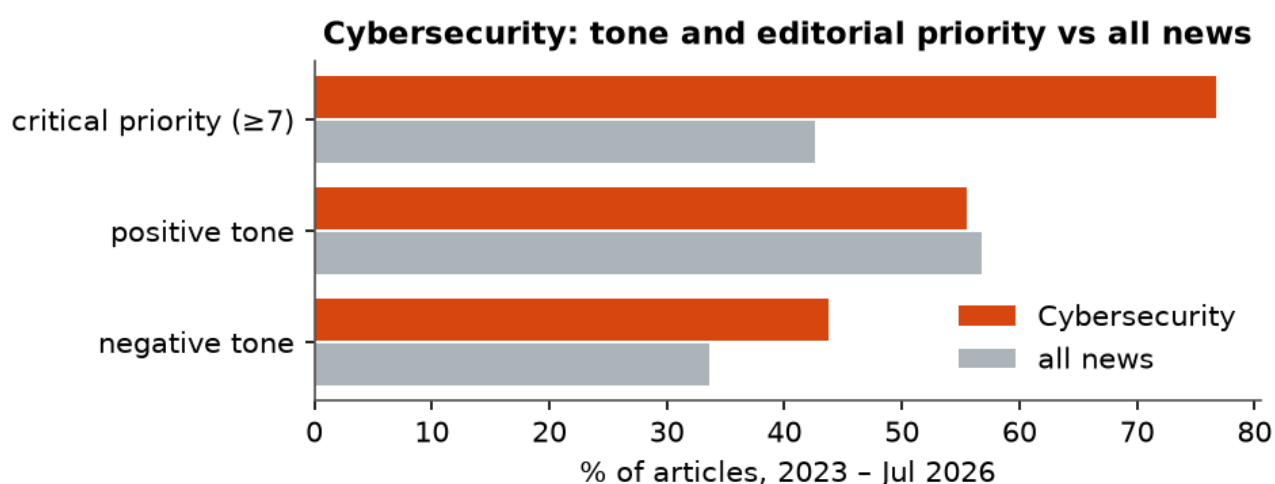


Figure 8. Tone and the share rated critical priority, cybersecurity articles vs all news, 2023 – Jul 2026.

Themes show what cybersecurity stories are about (Table 5). Threat intelligence is the most common theme (10.86% of themed articles). Ransomware attack vectors appear in 5.02%, 296.97 times their rate in all news, and network incident response in 5.64%. Data breach notification (1.76%) and monitoring of personal data on the dark web are smaller but highly specific to the topic.

Theme	Articles	Share %	Lift
ransomware prevention strategies	539	0.47	322.95
ransomware attack vectors	5,779	5.02	296.97
cybersecurity and ethical hacking workshops	418	0.36	256.72
computer networking and cybersecurity training	399	0.35	252.21
honeypot and deception technologies	1,180	1.03	215.33
network incident response strategies	6,493	5.64	214.64
data breach notification systems	2,031	1.76	212.08
malware and threat analysis in network traffic	6,930	6.02	209.68

Table 5. Themes most specific to cybersecurity coverage (lift against all themed news), January 2023 – July 2026.

The organisations named most often are technology firms: Microsoft (12,996 articles), Google (8,392), IBM (5,366), CrowdStrike (5,285), Cisco (3,069) and Palo Alto Networks (3,060). The organisation field also tags some technical terms (such as "iot" and "api") as organisations, so the list is indicative only.

3.5 Research attention and invention

Research on cybersecurity grew much faster than the scientific literature. Papers with a cybersecurity term in the title rose from 1.39 per 10,000 papers in 2015 to 12.2 in 2025, an 8.8-fold increase in share, while the total literature in the corpus grew by a factor of 1.0 over the same years. Between 2015 and 2025, 37,051 such papers were published, 8,579 of them in 2025 alone. The most-cited include surveys of machine learning for intrusion detection and of security in smart grids [1–4].

News attention does not track research attention (Figure 9). Research share rose every year and accelerated after 2022, while news share rose in 2021 and has been broadly flat since.

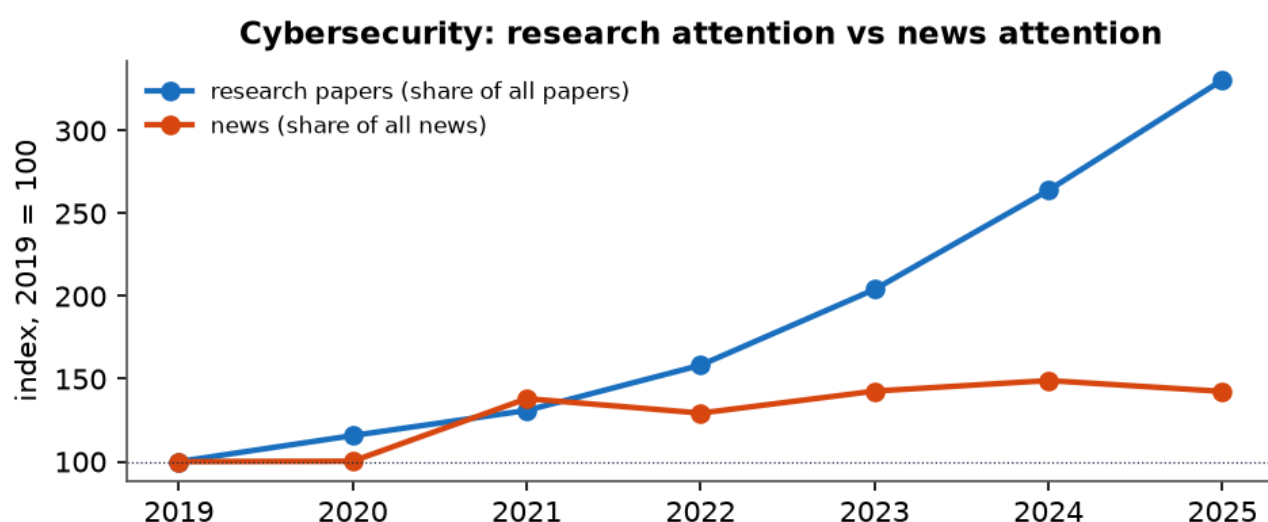


Figure 9. Research papers with cybersecurity terms in the title (share of all papers) and cybersecurity news (share of all news), each indexed to 2019 = 100.

Patent families rose from a small base: 41 patent families with cybersecurity terms in the title were published in 2015 and 566 in 2024 (13.8 times). The United States office holds 50.1% of family-office filings from 2015 to 2024, followed by international applications (15.5%), the European office (11.0%) and South Korea (9.0%) (Figure 10). The leading technology classes are network security and transmission (H04L, 837 families) and computing (G06F, 690).

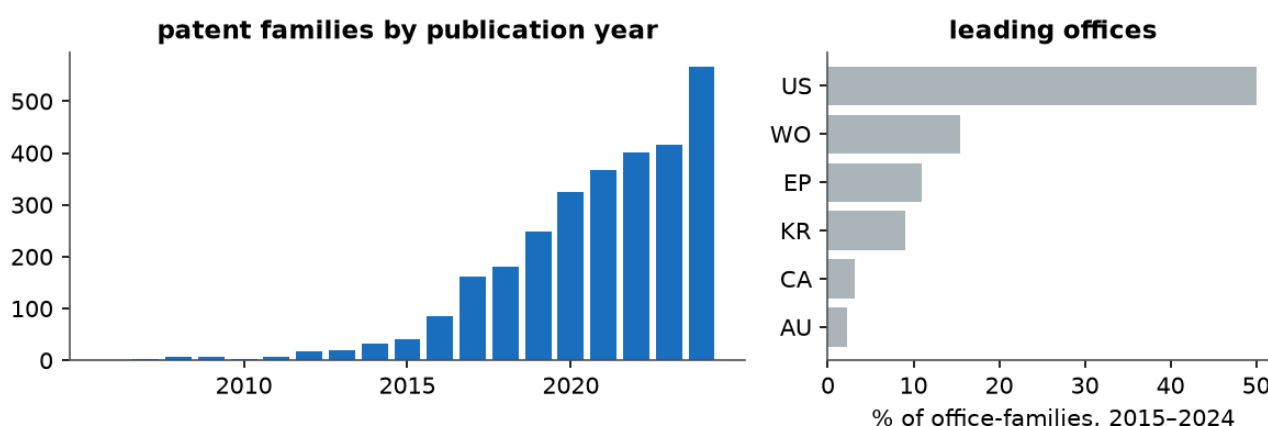


Figure 10. Cybersecurity patent families by publication year (left) and the leading filing offices, 2015–2024 (right).

4. Discussion

Three points matter for anyone who uses news as a record of cybersecurity. First, coverage measures attention, not attacks. The rise in 2021 and the high months of May 2021 and July 2024 coincide with large, visible incidents, and the July 2024 outage was not an attack at all. Second, raw shares mislead. The United States leads cybersecurity news in raw terms but is slightly under-represented relative to its weight in the index, while the United Kingdom, Singapore and Israel are over-represented. Within India, coverage is most over-represented in Karnataka and Telangana. Third, the index and its machine labels can distort the record: three apparent US state hot spots and three apparent country hot spots were place-tagging artefacts, and one day of repeated pages in March 2025 produced the highest value in the monthly series, which a careful reader must set aside.

Coverage is more negative than news in general, but more than half of it is positive, and product, funding and partnership announcements are common among the positive articles.

Country tone varies widely: in Israel and India cybersecurity coverage is less negative than local news, while in China, South Korea and Japan it is far more negative. This study does not test why.

Research, invention and news run on different clocks. Research share grew 8.8-fold in a decade and is still accelerating. Patent families grew from a small base and are concentrated at the United States office. News attention rose once, in 2021, and has since moved with major incidents. The dataset lets researchers link the three, for example to test whether heavily covered incidents are followed by research or patent activity in the affected country.

5. Limitations

- **Index availability.** 92.88% of the index was readable at build time, so counts are lower bounds. Shares and lifts are less affected, because the missing part is spread across topics.
- **Ingestion artefact.** Repeated copies of older pages taken in on 19 March 2025 inflate that month. Excluding the service pages of one testing company removed part of them; the rest are ordinary articles and remain in the counts.
- **Coverage after May 2026.** The index thins after May 2026, so 2026 is partial and is excluded from year comparisons.
- **Matching.** Matching uses the article opening. Articles that mention cybersecurity only later, or use only words such as "hacking" or "malware", are missed, and 7.5% of matches are not about digital security.
- **Machine labels.** Location, tone, priority, themes and organisations are machine-labelled. The city field is noisy and is not analysed.
- **Place tags from ordinary words.** Place tags derived from ordinary words were treated as unlocated (15.3% of city-tagged articles), so location counts are lower bounds. Some personal names and acronyms are still read as places, which is why Connecticut ("Sharon"), Alabama ("Dora"), Washington (the federal capital), Serbia ("Nis"), Venezuela ("Falcon") and the Netherlands ("Erp") are set aside.
- **Outlet mix.** The index over-represents English-language outlets. A few regional outlets can raise a small country's or state's lift.
- **Research and patent counts.** These match titles only. Many security papers and patents use other words ("information security", "intrusion detection") and are not counted.

Data availability

The dataset (article sample, monthly, country and state tables, research and patent tables, all metrics) is released under CC BY-NC 4.0 with this paper. The sample holds 50,714 of 404,431 matched articles to 31 July 2026. Full article text, headlines, publishers, later articles and other topics are served by the Prism News API: <https://github.com/fliarbi/prism-news-api> (base URL <https://radar-api.fliarbi.com/news>). A worked query: `prism-news trends "cybersecurity" --since 2019-01-01 --until 2026-07-31 --granularity monthly`.

References

1. Anna L. Buczak et al. (2015). A Survey of Data Mining and Machine Learning Methods for Cyber Security Intrusion Detection. *IEEE Communications Surveys & Tutorials*. <https://doi.org/10.1109/comst.2015.2494502>

2. Yang Xin et al. (2018). Machine Learning and Deep Learning Methods for Cybersecurity. *IEEE Access*. <https://doi.org/10.1109/access.2018.2836950>
3. Wenye Wang et al. (2013). Cyber security in the Smart Grid: Survey and challenges. *Computer Networks*. <https://doi.org/10.1016/j.comnet.2012.12.017>
4. Rossouw von Solms et al. (2013). From information security to cyber security. *Computers & Security*. <https://doi.org/10.1016/j.cose.2013.04.004>
5. Harjinder Singh Lallie et al. (2021). Cyber security in the age of COVID-19: A timeline and analysis of cyber-crime and cyber-attacks during the pandemic. *Computers & Security*. <https://doi.org/10.1016/j.cose.2021.102248>
6. Maanak Gupta et al. (2023). From ChatGPT to ThreatGPT: Impact of Generative AI in Cybersecurity and Privacy. *IEEE Access*. <https://doi.org/10.1109/access.2023.3300381>
7. Adil Hussain Seh et al. (2020). Healthcare Data Breaches: Insights and Implications. *Healthcare*. <https://doi.org/10.3390/healthcare8020133>
8. Fliar BI (2026). *Cybersecurity in the News 2019-2026: article-level dataset and coverage tables*. Prism News API. <https://github.com/fliarbi/prism-news-api>