Low supply plagues high demand for cybersecurity experts

Ransomware cyberattacks on the United States' largest fuel pipeline in May and on JBS Foods, the world's largest meat supplier, in June, have highlighted an urgent need for increased cybersecurity monitoring to protect U.S. infrastructures, industries, businesses and consumers from hackers.

According to CyberSeek — a joint-initiative data tool of the U.S. Commerce Department, a job market analytics firm and a workforce nonprofit — supply shortages of cybersecurity workers exist nationwide. CyberSeek reports that from April 2020 through March 2021, about 1 million cybersecurity workers across the country were employed in public and private sectors and about 500,000 more cybersecurity-related jobs were available. Every state was looking to hire.

For example, Alabama had 5,604 cybersecurity jobs openings, while it employed 11,380 cybersecurity workers. That means that for every two jobs filled, there was an additional job available.

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Cybersecurity job openings

Online job listings for public- and private-sector cybersecurity-related jobs, April 2020 through March 2021.

Cybersecurity workers employed

Estimated number of workers employed in cybersecurity-related jobs, April 2020 through March 2021.

Supply/demand ratio

Existing cybersecurity workers to cybersecurity job openings, public and private sector.

2.1 NATL. AVERAGE for cybersecurity jobs

3.9 NATL. AVERAGE for all jobs

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State	Cybersecurity job openings	Cybersecurity workers employed	Supply/demand ratio
Alabama	5,604	11,380	2.0
Alaska	832	1,725	2.1
Arizona	13,069	21,591	1.7
Arkansas	1,422	4711	3.3
California	55,487	102,431	1.8
Colorado	17,271	26,448	1.5
Connecticut	3,763	8,048	2.1
Delaware	1,413	3,138	2.2
District of Columbia	18,565	24,513	1.3
Florida	21,893	47,480	2.2
Georgia	17,083	33,301	1.9
Hawaii	2,707	5,241	1.9
Idaho	1,720	4,195	2.4
Illinois	15,838	35,334	2.2
Indiana	4,119	10,336	2.5
Iowa	3213	7,388	2.3
Kansas	2,535	6,543	2.6
Kentucky	2,320	5,724	2.5
Louisiana	2,686	5,881	2.2
Maine	769	4,180	5.4
Maryland	19,645	41,708	2.1
Massachusetts	13,389	23,615	1.8
Michigan	7,129	15,976	2.2
Minnesota	7912	16,443	2.1

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Sources: CyberSeek - a joint initiative between the National Initiative for Cybersecurity Education, led by the National Institute of Standards and Technology; job market analytics and strategic intelligence provider Burning Glass Technologies; and global technology industry and workforce nonprofit CompTIA
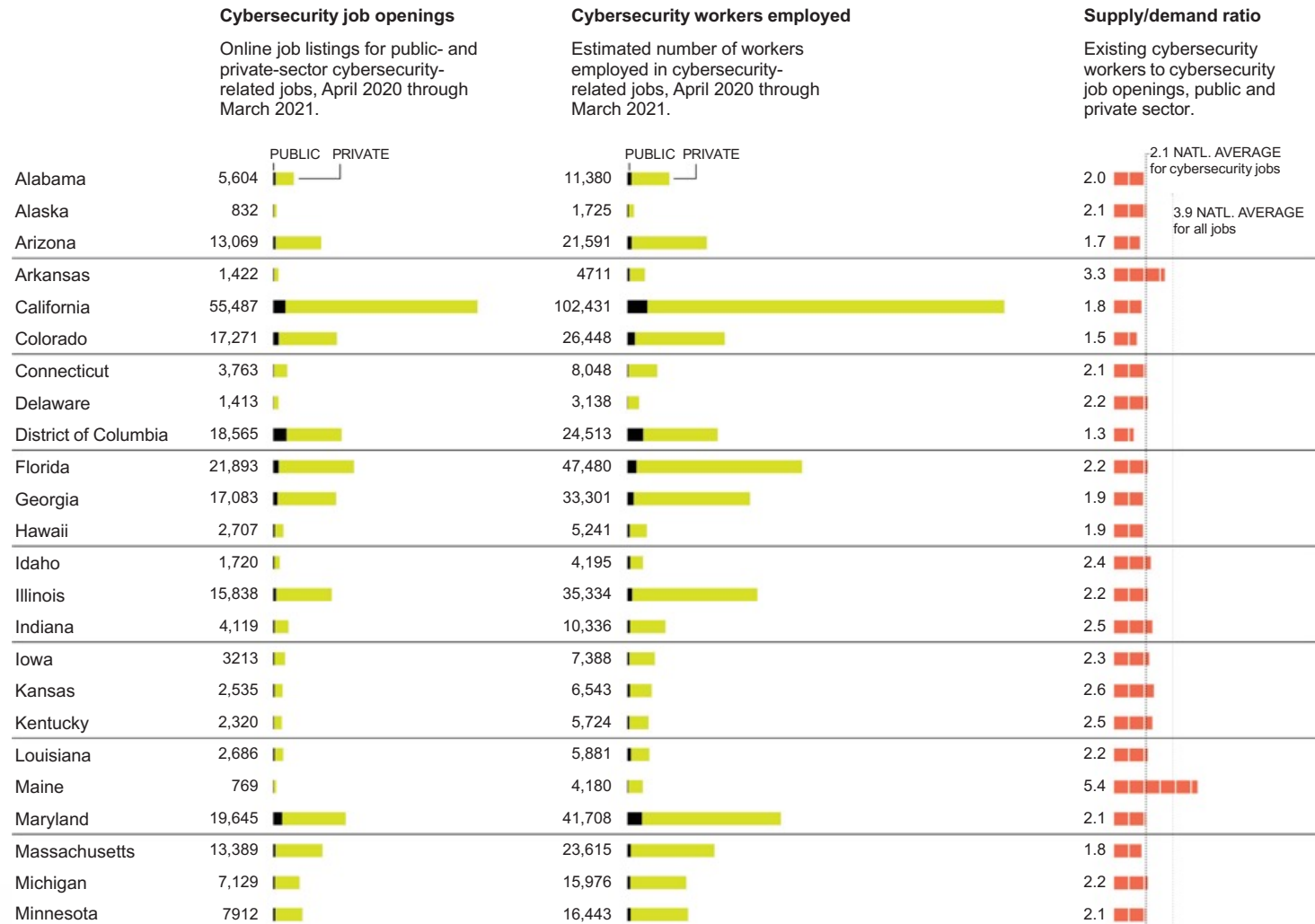
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	Cybersecurity job openings	Cybersecurity workers employed	Supply/demand ratio
Mississippi	1,478	3,676	2.5
Missouri	7,593	18,680	2.5
Montana	724	2,637	3.6
Nebraska	2,458	5,915	2.4
Nevada	2,505	4,434	1.8
New Hampshire	1,075	2,999	2.8
New Jersey	11,139	25,383	2.3
New Mexico	2,195	5,902	2.7
New York	19,432	54,053	2.8
North Carolina	17,660	33,072	1.9
North Dakota	840	1,762	2.1
Ohio	10,448	24,461	2.3
Oklahoma	2,576	6,878	2.7
Oregon	3,998	9,366	2.3
Pennsylvania	14,413	29,483	2.0
Rhode Island	1,283	2,895	2.3
South Carolina	5,145	12,094	2.4
South Dakota	679	2,052	3.0
Tennessee	5,064	11,145	2.2
Texas	42,469	81,544	1.9
Utah	4,125	9,207	2.2
Vermont	528	1,620	3.1
Virginia	49,151	85,200	1.7
Washington	9,953	24,190	2.4
West Virginia	1,298	4,275	3.3
Wisconsin	4,664	10,166	2.2
Wyoming	366	1,231	3.4

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