

Immigrants are 42 percent of California's STEM workforce

Forty-two percent of California's workers in science, technology, engineering and math occupations were born in a foreign nation, according to a recent analysis.

The American Immigration Council, a Washington, D.C.-based nonprofit, studied the occupational, gender, educational and geographic distribution of foreign-born STEM workers in the United States, using 2015 survey data by the U.S. Census Bureau.

Nationally, about one-quarter of the nation's STEM workforce is foreign-born, according to the report, "Foreign-born STEM Workers in the United States." It has grown significantly in recent years, doubling from 11.9 percent in 1990 to 24.3 percent in 2015, according to the advocacy group, which studies immigration to the United States.

"The importance of foreign-born workers in STEM occupations cannot be overstated," according to the report. "As the demand for STEM workers continues to increase, foreign-born STEM workers will play a key role in U.S. productivity and innovation."

Other studies have found that the foreign-born are more likely than the native-born to obtain a patent — and that immigrants account for rising shares of U.S. patents in computing, electronics, medical devices and pharmaceuticals. More than 40 percent of companies in the Fortune 500 in 2010 were founded by an immigrant or the child of an immigrant.

Immigrants help native-born co-workers because their innovations boost the productivity and revenue of STEM-focused businesses, enabling employers to hire more workers, according to the American Immigration Council. One study of workplaces found that adding 100 foreign-born workers in STEM fields with advanced degrees from U.S. universities led to an additional 262 jobs for U.S.-born workers.

For instance, Tesla's Elon Musk came to the U.S. in his 20s after growing up in South Africa and studying in Canada. Yahoo founder Jerry Yang reportedly knew only one English word when he moved from Taiwan at the age of 12. EBay founder Pierre Omidyar is a French-born Iranian-American.

While foreign-born workers make up a growing share of all STEM occupations, there is quite a bit of variation between fields, the new analysis found. They make up 39 percent of software

engineers, 27 percent of computer programmers and 25 percent of computer systems analysts.

In engineering, foreign-born workers are most prominent in electrical and electronic engineering, making up 28 percent of the workforce. They represent 18 percent of workers in other engineering jobs.

In management positions, they are most abundant in computer and information systems, representing 21 percent of managers.

Twenty-nine percent of America's physicians are foreign-born.

Of the nation's 50 states, California ranks second in its proportion of foreign-born STEM workers — one percentage point lower than New Jersey, where 43 percent are immigrants. New York was the third-ranking state, with 29 percent. In 16 other states, foreign-born workers make up 20 percent or more of all STEM workers. The states with the lowest percentage of foreign-born workers were Wyoming, with 0.8 percent; South Dakota, 4; Mississippi, 5; and North Dakota, 5.

When the health and social science occupations are added to the California STEM analysis, foreign-born workers make up a slightly smaller share of our workforce: 37 percent. These professionals include physicians, dentists, veterinarians, opticians and pharmacists, as well as technologists, therapists and technicians in these fields.

The study also found that the nation's foreign-born STEM workers are more highly educated than their U.S.-born co-workers. Almost half, or 47 percent, of foreign-born STEM workers had five or more years of college, compared to 26 percent of all STEM workers.

As demand grows in these fields, so will the need for an educated workforce. The U.S. Bureau of Labor Statistics has projected that STEM occupations will increase about 13 percent from 2012 to 2022, compared to 11 percent projected for all occupations.

"While increasing the number of native-born Americans in STEM fields is critical," the report concluded, "foreign-born STEM students and workers may still be needed if the United States is to be prepared for future labor needs and excel globally."

Region	June 2016	May 2017	June 2017	Percentage Point Change	
				1 month	12 months
San José–Sunnyvale MSA	4.0%	3.0%	3.6%	+ 0.6	- 0.4
San Francisco MD	3.3%	2.5%	3.1%	+ 0.6	- 0.2
California	5.6%	4.2%	4.9%	+ 0.7	- 0.7
United States	5.1%	4.1%	4.5%	+ 0.4	- 0.6

Sector — June 2017	San Jose MSA (June 2017)	San Francisco MD (June 2017)	Combined Region (June 2017r)	Percentage Change (Combined Region)	
				1 month	12 months
Total Nonfarm	1,090,900	1,117,700	2,208,600	+ 0.6%	+ 2.1%
Construction	48,300	41,600	89,900	+ 1.7%	+ 3.6%
Manufacturing	166,300	37,900	204,200	+ 1.0%	+ 1.0%
Retail Trade	85,800	80,800	166,600	+ 0.9%	+ 0.6%
Information	79,300	73,100	152,400	+ 3.7%	+ 4.0%
Professional & Business Services	227,800	271,200	499,000	+ 0.6%	+ 0.4%
Educational Services	45,600	27,900	73,500	- 2.6%	+ 0.1%
Health Care & Social Assistance	121,300	107,900	229,200	- 0.5%	+ 3.8%
Leisure & Hospitality	105,100	148,400	253,500	+ 1.5%	+ 5.8%
Government	96,900	128,300	225,200	- 1.2%	+ 1.1%

NOTE: San José MSA (San José–Sunnyvale–Santa Clara Metropolitan Statistical Area) = Santa Clara and San Benito Counties
San Francisco MD (San Francisco–Redwood City–South San Francisco Metropolitan Division) = San Mateo and San Francisco Counties

Source: California Employment Development Department, LMID

Jurisdiction	Labor Force			Unemployment			Unemployment Rate		
	June 2016	June 2017	Change	June 2016	June 2017	Change	June 2016	June 2017	Change
• San Mateo County	447,200	448,400	0.3%	14,000	13,100	- 6.4%	3.1%	2.9%	- 0.2
• Santa Clara County	1,028,900	1,022,700	- 0.6%	40,300	35,900	- 10.9%	3.9%	3.5%	- 0.4
– Cupertino	29,400	29,200	- 0.7%	900	800	- 11.1%	3.2%	2.8%	- 0.4
– Los Altos	14,500	14,400	- 0.7%	400	300	- 25.0%	2.5%	2.3%	- 0.2
– Milpitas	40,900	40,700	- 0.5%	1,500	1,300	- 13.3%	3.7%	3.3%	- 0.4
– Mountain View	50,200	50,000	- 0.4%	1,500	1,300	- 13.3%	3.0%	2.7%	- 0.3
– Palo Alto	35,200	35,000	- 0.6%	900	800	- 11.1%	2.7%	2.4%	- 0.3
– Santa Clara	68,900	68,600	- 0.4%	2,400	2,200	- 8.3%	3.5%	3.2%	- 0.3
– Sunnyvale	86,000	85,600	- 0.5%	3,000	2,700	- 10.0%	3.5%	3.1%	- 0.4
NOVA Region	772,300	771,900	- 0.1%	24,800	22,500	- 9.3%	3.2%	2.9%	- 0.3

NOTE: NOVA Region consists of seven cities in Northern Santa Clara County and the entirety of San Mateo County

Source: California Employment Development Department, LMID

June 2017 Events			# Affected	WARN SUMMARY	
Company	Location			Events YTD [†] :	107
DaVita Rx	San Bruno		5	Individuals Affected YTD:	6,617
Evotec	South San Francisco		18	Individuals Previous YTD [‡] :	6,566
Marvell Semiconductor	Santa Clara		13		
Space Systems Loral	Palo Alto		173		
Symantec Corp.	Mountain View		60		
Texas Instruments	Santa Clara		78		
Vishay	Santa Clara		71		
Total			418		

* **WARN: Worker Adjustment and Retraining Notification** (notice of mass layoff or closure)
[†] **YTD: Year to Date** (Program year: July 1–June 30)
[‡] **Previous YTD:** No data available for San Mateo County, FY2014/15; avoid direct comparisons with YTD numbers

NOTE: Layoff data are preliminary and should be considered an estimate of monthly regional activity

Source: NOVA's internal Rapid Response database