

TABLE CET-13

Companies performing or funding human-machine interfaces technology R&D, by industry: 2021

(Number and percent)

Industry	NAICS code	Companies (number)	Human-machine interfaces			
			Number		Percent	
			Yes	No	Yes	No
All industries	11, 21–23, 31–33, 42–81	4,874,928	20,789	4,854,139	0.4	99.6
Manufacturing industries	31–33	209,282	1,301	207,981	0.6	99.4
Food	311	19,326	30	19,296	0.2	r 99.8
Beverage and tobacco products	312	9,354	7	r 9,347	0.1	r 99.9
Textile, apparel, and leather products	313–16	9,443	20	9,423	0.2	99.8
Wood products	321	9,546	24	r 9,522	0.2	r 99.8
Paper	322	1,500	1	r 1,499	0.1	r 99.9
Printing and related support activities	323	20,212	6	r 20,206	0.0	r 100.0
Petroleum and coal products	324	546	2	r 544	0.4	r 99.6
Chemicals	325	7,961	30	7,931	0.4	99.6
Pesticide, fertilizer, and other agricultural chemicals	3253	580	3	r 577	0.5	r 99.5
Pharmaceuticals and medicines	3254	1,536	7	r 1,529	0.5	r 99.5
Soap, cleaning compound, and toilet preparation	3256	1,652	5	1,647	0.3	99.7
Other chemicals	other 325	4,194	14	4,180	0.3	99.7
Plastics and rubber products	326	7,060	30	7,030	0.4	99.6
Nonmetallic mineral products	327	7,290	25	7,265	0.3	99.7
Primary metals	331	2,079	10	r 2,069	0.5	r 99.5
Fabricated metal products	332	46,128	128	46,000	0.3	99.7
Machinery	333	16,440	330	16,110	2.0	98.0
Computer and electronic products	334	8,527	248	8,279	2.9	97.1
Communications equipment	3342	850	38	r 812	4.5	r 95.5
Semiconductor and other electronic components	3344	2,711	80	2,631	2.9	97.1
Navigational, measuring, electromedical, and control instruments	3345	3,737	94	3,643	2.5	97.5
Other computer and electronic products	other 334	1,230	35	r 1,195	2.9	r 97.1
Electrical equipment, appliances, and components	335	3,925	77	3,848	2.0	98.0
Transportation equipment	336	7,325	98	7,227	1.3	98.7
Automobiles, bodies, trailers, and parts	3361–63	4,494	44	4,450	1.0	99.0
Aerospace products and parts	3364	1,044	18	1,026	1.7	98.3
Other transportation	other 336	1,787	33	r 1,754	1.8	r 98.2
Furniture and related products	337	12,060	9	12,051	0.1	99.9
Miscellaneous	339	20,536	219	20,317	1.1	r 98.9
Medical equipment and supplies	3391	7,602	135	7,467	1.8	r 98.2
Other miscellaneous manufacturing	3399	12,933	82	r 12,851	0.6	r 99.4
Nonmanufacturing industries	11, 21–23, 42–81	4,665,645	19,487	4,646,158	0.4	99.6
Agriculture, forestry, fishing, and hunting	11	19,567	2	19,565	0.0	100.0
Mining, extraction, and support activities	21	14,004	38	r 13,966	0.3	r 99.7
Utilities	22	2,994	10	2,984	0.3	99.7
Construction	23	635,568	1,263	634,305	0.2	99.8
Wholesale trade	42	241,440	1,024	240,416	0.4	99.6
Retail trade	44–45	546,067	1,155	544,912	0.2	99.8
Transportation and warehousing	48–49	165,454	339	165,115	0.2	99.8
Information	51	65,445	1,167	64,278	1.8	98.2
Publishing	511	17,755	398	17,357	2.2	97.8
Newspaper, periodical, book, and directory publishers	5111	9,162	9	9,153	0.1	99.9
Software publishers	5112	8,589	390	8,199	4.5	95.5
Telecommunications	517	7,319	91	r 7,228	1.2	r 98.8
Data processing, hosting, and related services	518	8,346	233	8,113	2.8	97.2

TABLE CET-13

Companies performing or funding human-machine interfaces technology R&D, by industry: 2021

(Number and percent)

Industry	NAICS code	Companies (number)	Human-machine interfaces			
			Number		Percent	
			Yes	No	Yes	No
Other information	other 51	32,027	446	31,581	1.4	98.6
Finance and insurance	52	198,128	421	197,707	0.2	99.8
Real estate and rental and leasing	53	283,276	790	282,486	0.3	99.7
Lessors of nonfinancial intangible assets (except copyrighted works)	533	1,956	46 r	1,910	2.4 r	97.6
Other real estate and rental and leasing	other 53	281,321	745	280,576	0.3	99.7
Professional, scientific, and technical services	54	717,229	6,660	710,569	0.9	99.1
Legal services	5411	152,543	408	152,135	0.3	99.7
Accounting, tax preparation, bookkeeping, and payroll services	5412	109,075	341	108,734	0.3	99.7
Architectural, engineering, and related services	5413	87,994	1,410	86,584	1.6	98.4
Specialized design services	5414	29,258	335	28,923	1.1	98.9
Computer systems design and related services	5415	100,282	2,513	97,769	2.5	97.5
Management, scientific, and technical consulting services	5416	144,421	1,036	143,385	0.7	99.3
Scientific research and development services	5417	11,149	295	10,854	2.6	97.4
Advertising, public relations, and related services	5418	28,236	179	28,057	0.6	99.4
Other professional, scientific, and technical services	5419	54,270	146	54,124	0.3	99.7
Management of companies and enterprises	55	3,153	72 r	3,081	2.3 r	97.7
Administrative and support and waste management and remediation services	56	293,539	842	292,697	0.3	99.7
Educational services	61	57,078	355	56,723	0.6	99.4
Health care and social assistance	62	536,276	2,122	534,154	0.4	99.6
Health care services	621-23	469,939	1,858	468,081	0.4	99.6
Social assistance	624	66,336	264	66,072	0.4	99.6
Arts, entertainment, and recreation	71	89,491	217	89,274	0.2	99.8
Accommodation and food services	72	455,071	2,024	453,047	0.4	99.6
Other services	81	341,869	922	340,947	0.3	99.7

r = relative standard error > 50%.

NAICS = 2017 North American Industry Classification System.

Note(s):

Detail across rows may not add to total because of rounding or unavailable NAICS detail for select records beyond the 4-digit industry classification. Detail across columns have been adjusted to add to total. Industry classification is based on dominant establishment payroll. Statistics are representative of companies located in the United States.

Source(s):

National Center for Science and Engineering Statistics and Census Bureau, 2022 Annual Business Survey: Data Year 2021.