Engineering and Science Technologies Career Field In-Demand Jobs Data

The Engineering and Science Technologies Career Field prepares students for careers in design, operations, manufacturing and STEM (Science, Technology, Engineering and Math). The list of careers used in the figures below can be found in the Appendix. The data presented below does not account for the economic impacts of Intel's upcoming $20 billion investment in Central Ohio.

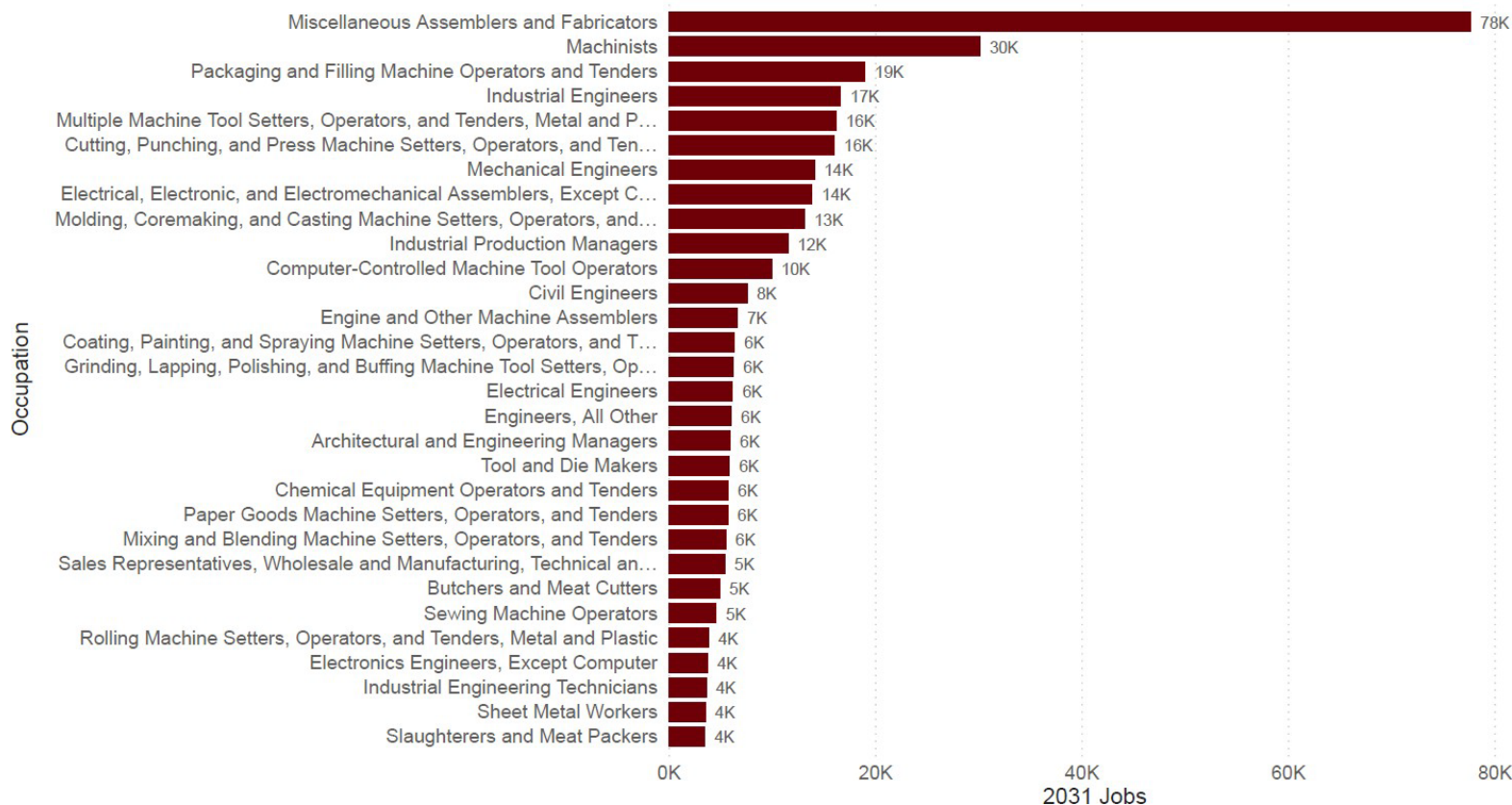Projected Growth of Engineering and Science Technologies Jobs in Ohio (2031)

Figure 1.

Figure 1 shows the highest in-demand occupations projected for 2031 in the Engineering and Science Technologies career field, with Miscellaneous Assemblers and Fabricators topping the list with almost 78,000 jobs in Ohio in 2031.

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Figure 2.

Projected Growth of Engineering and Science Technologies Jobs in Ohio (2021-2031)

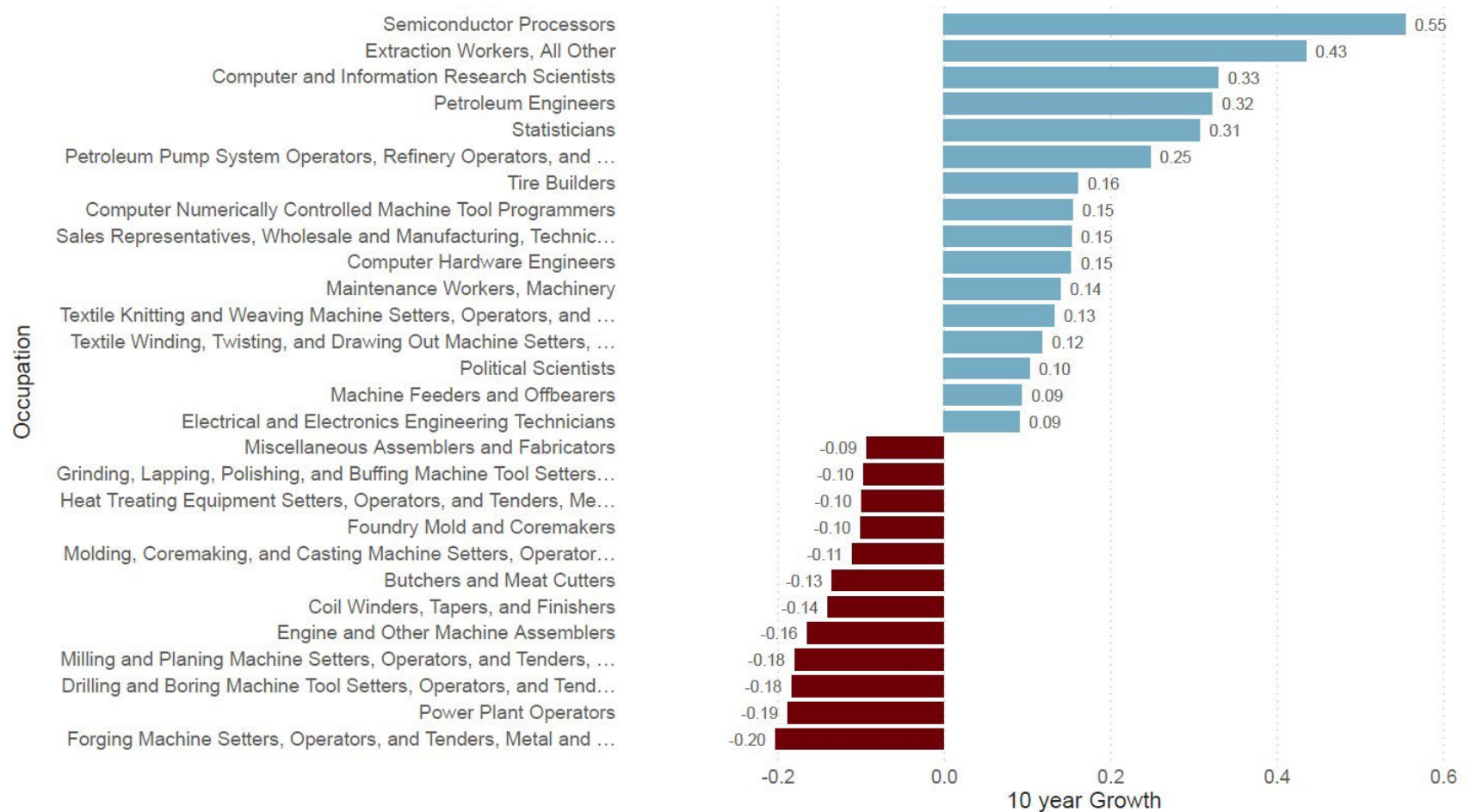| Occupation	10 year Growth
Semiconductor Processors	0.55
Extraction Workers, All Other	0.43
Computer and Information Research Scientists	0.33
Petroleum Engineers	0.32
Statisticians	0.31
Petroleum Pump System Operators, Refinery Operators, and …	0.25
Tire Builders	0.16
Computer Numerically Controlled Machine Tool Programmers	0.15
Sales Representatives, Wholesale and Manufacturing, Technic…	0.15
Computer Hardware Engineers	0.15
Maintenance Workers, Machinery	0.14
Textile Knitting and Weaving Machine Setters, Operators, and …	0.13
Textile Winding, Twisting, and Drawing Out Machine Setters, …	0.12
Political Scientists	0.10
Machine Feeders and Offbearers	0.09
Electrical and Electronics Engineering Technicians	0.09
Miscellaneous Assemblers and Fabricators	-0.09
Grinding, Lapping, Polishing, and Buffing Machine Tool Setters…	-0.10
Heat Treating Equipment Setters, Operators, and Tenders, Me…	-0.10
Foundry Mold and Coremakers	-0.10
Molding, Coremaking, and Casting Machine Setters, Operator…	-0.11
Butchers and Meat Cutters	-0.13
Coil Winders, Tapers, and Finishers	-0.14
Engine and Other Machine Assemblers	-0.16
Milling and Planing Machine Setters, Operators, and Tenders, …	-0.18
Drilling and Boring Machine Tool Setters, Operators, and Tend…	-0.18
Power Plant Operators	-0.19
Forging Machine Setters, Operators, and Tenders, Metal and …	-0.20

Figure 2 demonstrates the projected growth over the next ten years as a percentage. The blue represents positive growth, with the highest projected growth of 55% in Semiconductor Processors. The red represents negative growth or a decrease in the number of jobs, with the greatest expected decrease in Forging Machine Setters, Operators, and Tenders, Metal and Plastic.

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Figure 3.

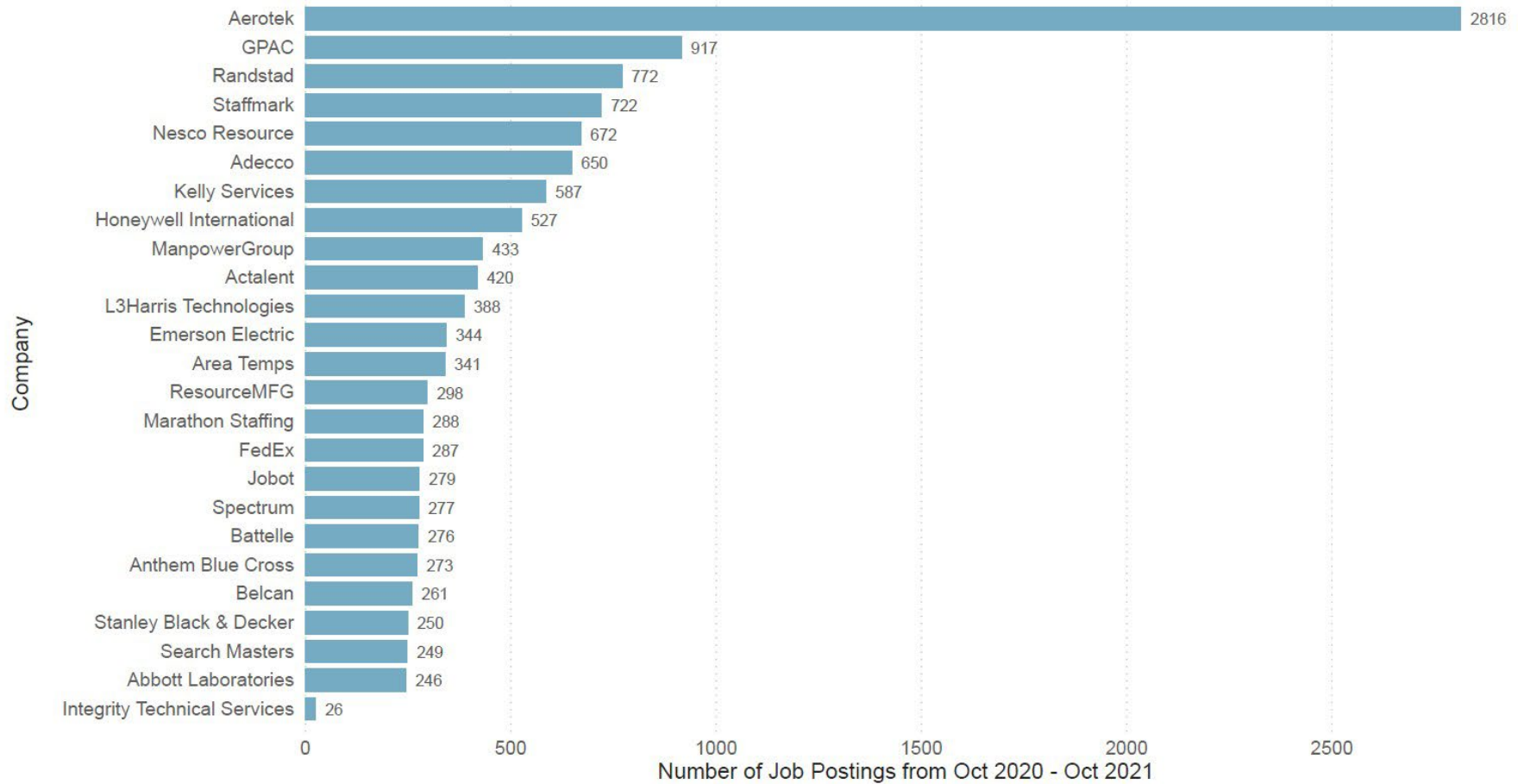## Top Companies for Engineering and Science Technologies Jobs in Ohio

Figure 3 shows the top companies hiring in the Engineering and Science Technologies career field over a one-year period (October 2020-October 2021). There was a total of 82,341 engineering and science technologies job postings during this time period, with the highest number from Aerotek at 2,816.

Figure 4.

Demand and Supply of Engineering and Science Technologies Jobs in Ohio
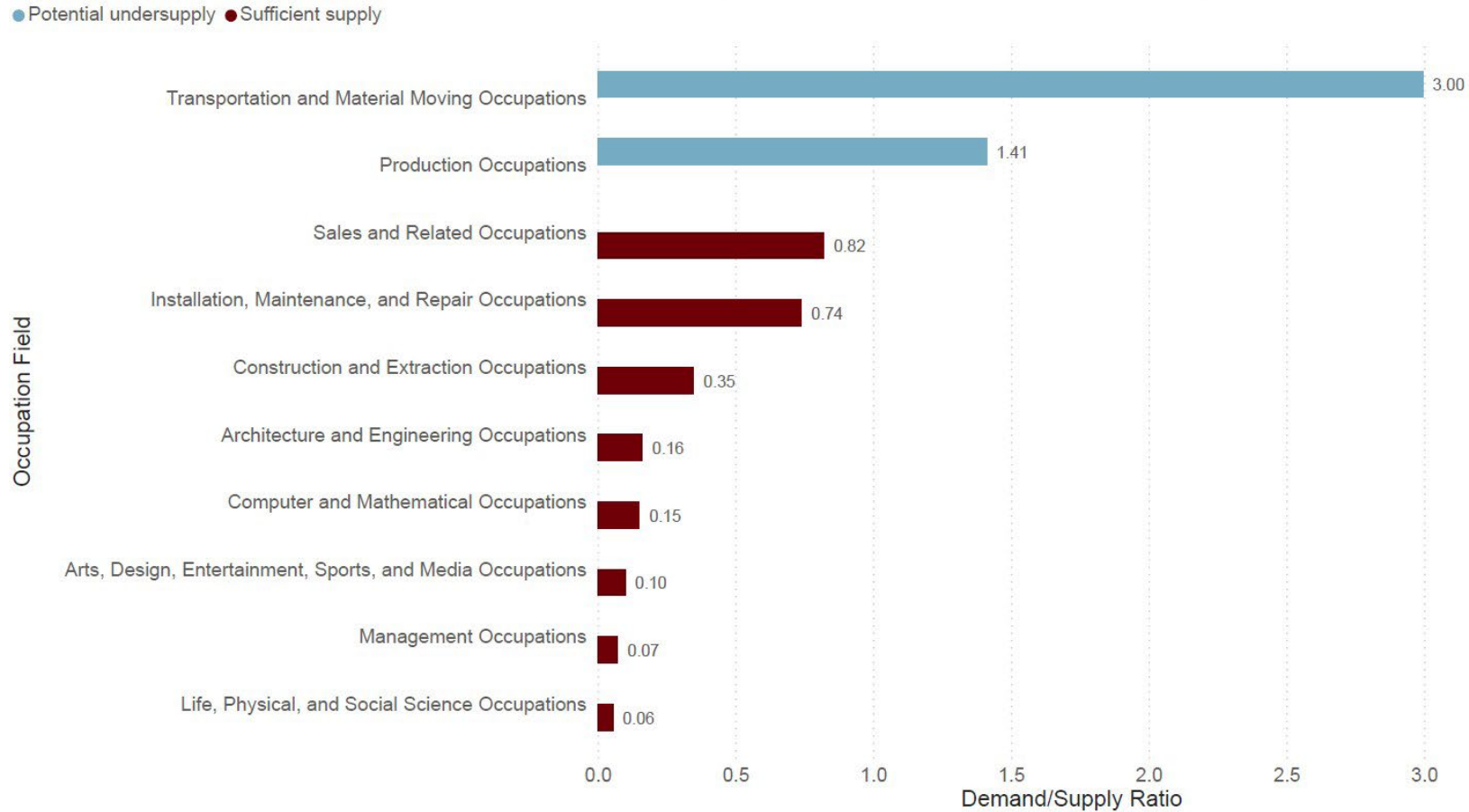

Figure 4 shows the demand and supply ratio for different areas in the career field. The ratio is calculated using the formula, job openings divided by the sum of graduates and those unemployed in the field [Ratio= Openings/(Graduates+Unemployed)]. A ratio of one or greater demonstrates a potential undersupply and less than one shows a sufficient supply. Transportation and Material Moving Occupations and Production Occupations are in potential undersupply.

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Figure 5.

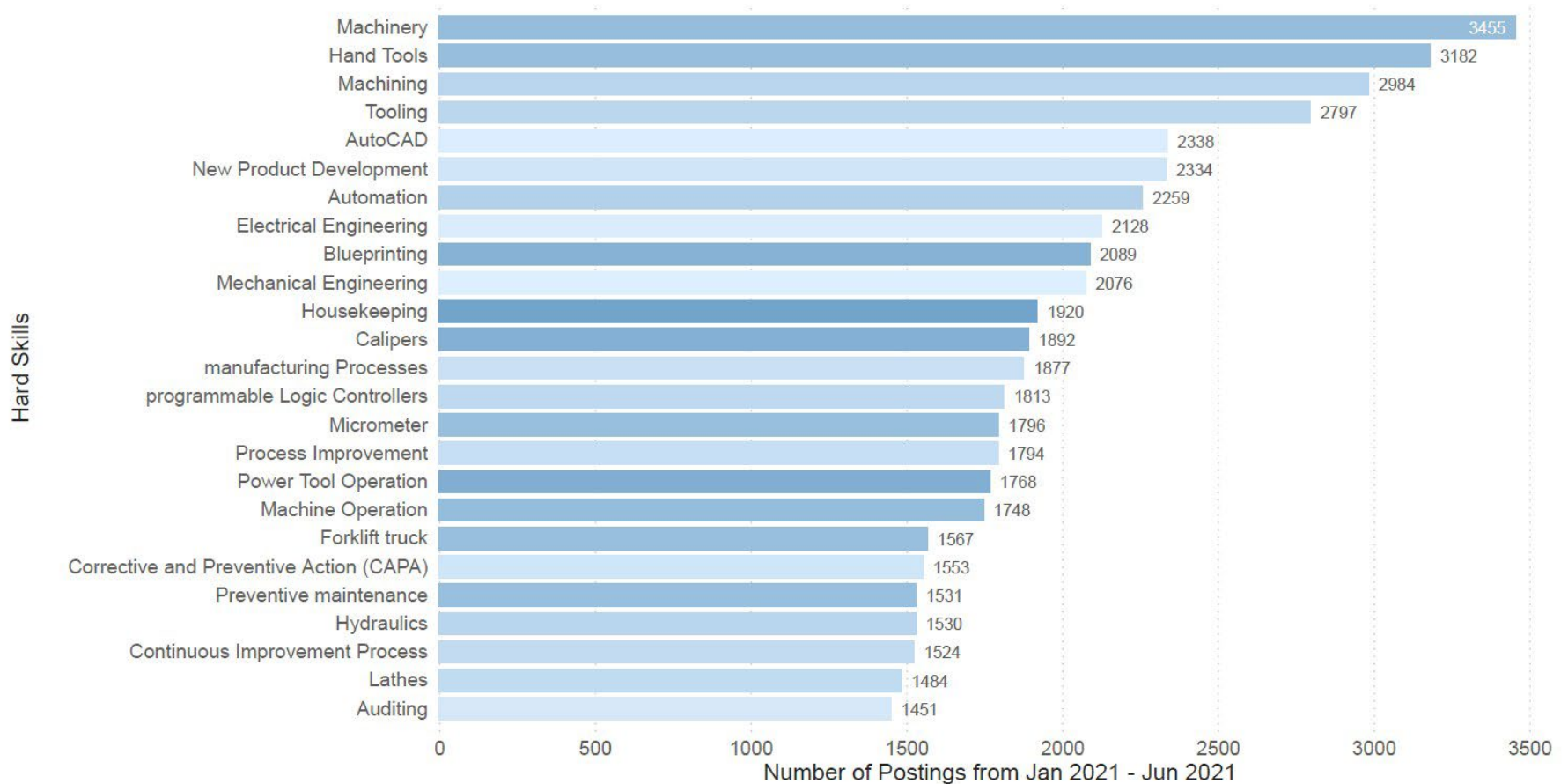Demand for Hard Skills in Engineering and Science Technologies Jobs in Ohio

Figure 5 shows the top 25 in-demand hard skills employers are looking for in engineering and science technologies jobs, with the top skill being machinery. Additionally, the darker blue demonstrates skills that have seen a greater increase in demand from 2017 to 2021. The greatest increase in demand is in Housekeeping and Power Tool Operation at 198% and 173%, respectively.

Demand for Soft Skills in Engineering and Science Technologies Jobs in Ohio

Growth 0.06 ▭▭▭ 1.89

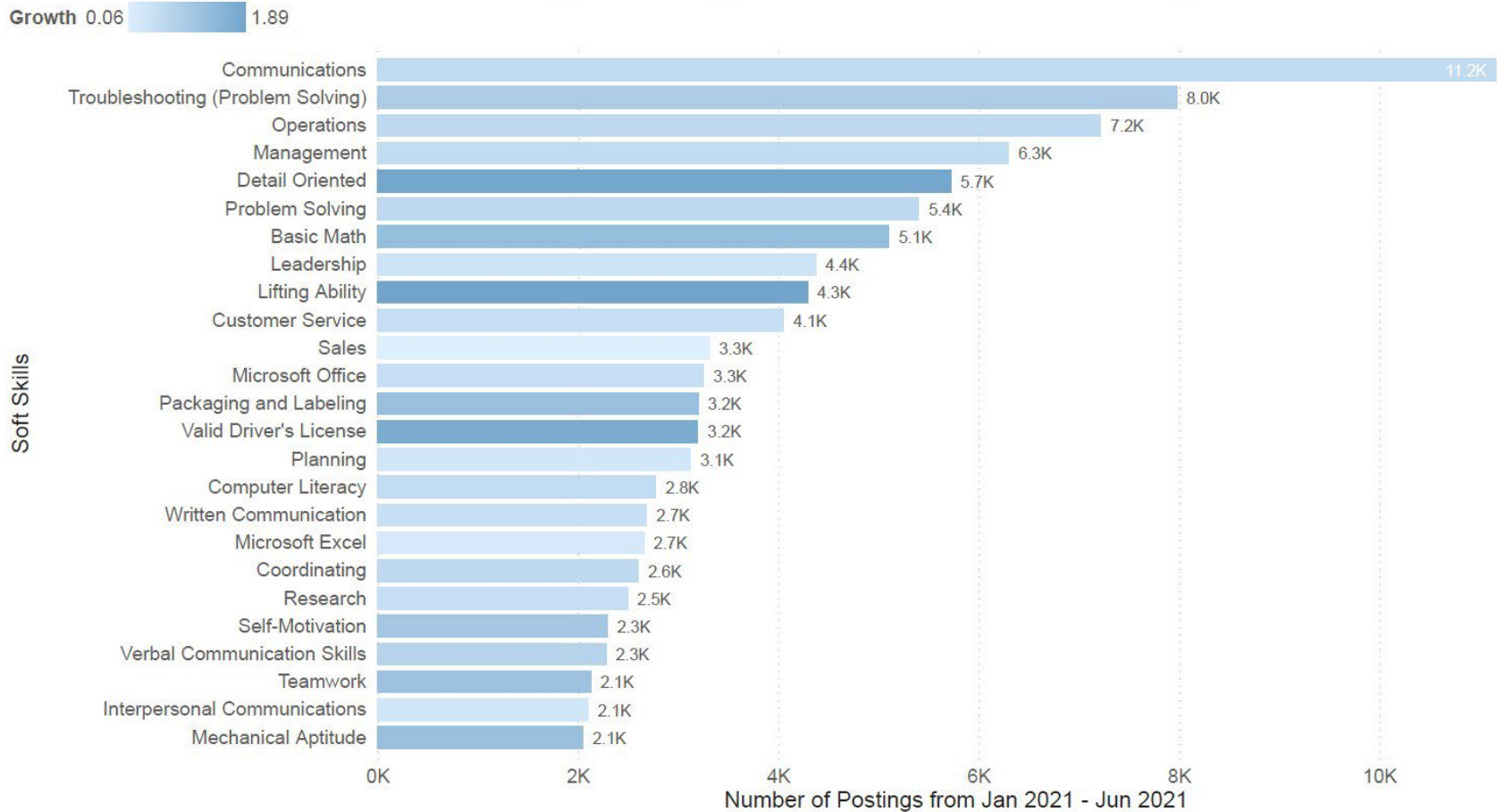| Soft Skills	Number of Postings from Jan 2021 - Jun 2021
Communications	11.2K
Troubleshooting (Problem Solving)	8.0K
Operations	7.2K
Management	6.3K
Detail Oriented	5.7K
Problem Solving	5.4K
Basic Math	5.1K
Leadership	4.4K
Lifting Ability	4.3K
Customer Service	4.1K
Sales	3.3K
Microsoft Office	3.3K
Packaging and Labeling	3.2K
Valid Driver's License	3.2K
Planning	3.1K
Computer Literacy	2.8K
Written Communication	2.7K
Microsoft Excel	2.7K
Coordinating	2.6K
Research	2.5K
Self-Motivation	2.3K
Verbal Communication Skills	2.3K
Teamwork	2.1K
Interpersonal Communications	2.1K
Mechanical Aptitude	2.1K

Figure 6.

Figure 6 shows the top 25 in-demand soft skills employers are looking for in engineering and science technologies jobs. The top skill is communications, which appeared in over 11,000 job postings between January 2021 and June 2021. Additionally, the darker blue demonstrates skills that have seen a greater increase in demand from 2017 to 2021. The greatest increase in demand is in Lifting Ability and Detail Oriented at 189% and 186%, respectively.

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Appendix

Standard Occupational Classification (SOC)	Occupation
11-3051	Industrial Production Managers
11-9041	Architectural and Engineering Managers
15-1221	Computer and Information Research Scientists
15-2021	Mathematicians
15-2041	Statisticians
17-1011	Architects, Except Landscape and Naval
17-1021	Cartographers and Photogrammetrists
17-2011	Aerospace Engineers
17-2031	Biomedical Engineers
17-2041	Chemical Engineers
17-2051	Civil Engineers
17-2061	Computer Hardware Engineers
17-2071	Electrical Engineers
17-2072	Electronics Engineers, Except Computer
17-2081	Environmental Engineers
17-2112	Industrial Engineers
17-2121	Marine Engineers and Naval Architects
17-2131	Materials Engineers
17-2141	Mechanical Engineers
17-2151	Mining and Geological Engineers, Including Mining Safety Engineers
17-2161	Nuclear Engineers
17-2171	Petroleum Engineers
17-2199	Engineers, All Other
17-3011	Architectural and Civil Drafters
17-3012	Electrical and Electronics Drafters
17-3013	Mechanical Drafters
17-3021	Aerospace Engineering and Operations Technicians