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About This Report

The Workforce Intelligence Network for Southeast Michigan (WIN) partnership is a collaboration of six Michigan Works! Agencies (MWAs) and ten community colleges across a 16-county region in Michigan. The counties in the WIN partnership include: Genesee, Hillsdale, Huron, Jackson, Lapeer, Lenawee, Livingston, Macomb, Monroe, Oakland, Saint Clair, Sanilac, Shiawassee, Tuscola, Washtenaw, and Wayne, along with the City of Detroit.

This report highlights labor market information and real-time job posting data for Livingston county. A workforce overview is provided within identifying key components of the area's labor market including labor force status, demographic, and commuting data. WIN's analysis of online job postings, a proxy for employer demand, is a pioneering method for tracking the health of the labor market. This data is used to provide a real-time demand overview, detailing posting related findings for both employers and job seekers. WIN's data and research team analyzes job posting data at the occupation level within eleven customized occupation groups built using specific Standard Occupational Classification (SOC) codes to provide more contextualized information. Occupation groups combine data for jobs with similar skillsets, educational attainment, and experience requirements, which provides a more in-depth snapshot of the current labor market when compared to traditional industry data based upon North American Industry Classification System (NAICS) codes. Occupation outlook sections utilize these metrics to identify and display the top in-demand jobs, their entry requirements, and their earning potential.

WIN produces a 16-county region report quarterly using data from all eleven occupation groups. A report focused on the city of Detroit is also produced quarterly, focusing on five occupation groups related to Detroit's labor market. County reports are produced annually and focus on five occupation groups chosen to reflect the labor market specific to the county.

This report analyzes data from the fourth quarter of 2018 in Livingston county and includes summative data for October, November, and December of 2018. The Livingston report focuses on analyzing the Business and Finance, Customer Service, Health Care, Information Technology, and Skilled Trades occupation reports.

For more information pertaining to the labor market in southeast Michigan, the custom occupation groups within this report, or any other workforce-related data projects, please visit www.WINintelligence.org or contact the data and research team directly at research@WINintelligence.org.

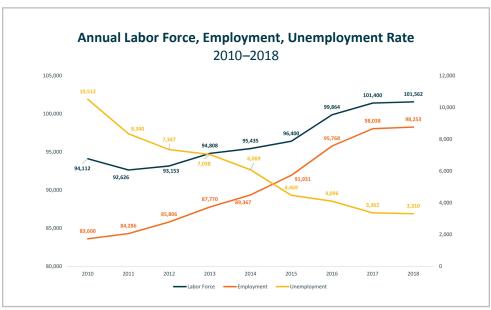


State of the Labor Market in Livingston County

During 2018, the labor force figures increased in Livingston while employment continued to grow. With this simultaneous increase in both labor force and employment, the number of unemployed individuals decreased in the county. This caused the unemployment rate to drop less than 0.1 percentage points, from the 3.32 percent annual rate in 2017 to a 2018 annual rate of 3.26 percent. Employer demand for most occupation groups analyzed by WIN also increased during Q4 2018. The customer service occupation group reported the highest demand with over 8,000 job postings during the quarter. Other occupation groups also offer great job opportunities for active job seekers: Customer Service postings grew by 19 percent from Q3 2018, and 19 percent of postings were open to entry-level applicants.

Annual Labor Market Information

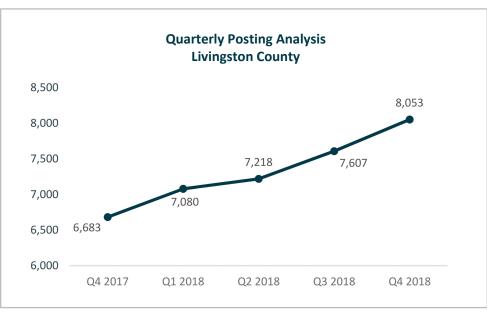
Moving into a ten-year high, the labor force in the Livingston county increased by 162 individuals between 2017 and 2018. Employment increased by 214 workers between 2017 and 2018. With employment increasing at a greater rate than the labor force, the unemployment rate fell by 0.06 percentage points from the annual rate of 3.32 percent in 2017 to an annual 2018 rate of 3.26 percent in the county.



Data: BLS | Analysis: Workforce Intelligence Network

Quarterly Employer Demand Overview

Data from the fourth quarter of 2018, including posting information from October, November, and December, showed employer demand continue to grow from Q4 2017, throughout Livingston County. There were 1,370 more postings during Q4 2018 compared to the 6,683 postings made by employers during Q4 2017 for a total of 8,053 postings. Typically, the first half of the year tends to report lower postings than the second half, and 2018 was no exception with the increase in postings between each quarter of 2018.

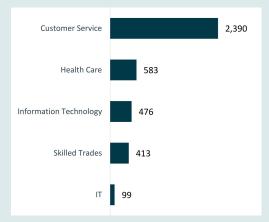


Data: Emsi | Analysis: Workforce Intelligence Network

Employer demand surges to over 8,000 postings during Q4 2018, with most occupation groups analyzed by WIN experiencing increases in online job postings between Q3 and Q4 2018.

During Q4 2018, there were 8,053 jobs posted, 446 more than the jobs posted during Q3 2018 in Livingston County. Most of the occupation groups analyzed by WIN experienced an increase during the fourth quarter of 2018. Customer service related postings increased by 379 postings, increasing 19 percent from the previous quarter (Q3 2018). This level of online job postings is the highest over the past two years, with the county reporting over 8,000 for the first time. For more information about quarterly job postings, see page 2.

Top 5 Posting Occupation GroupsO4 2018



Data: Emsi | Analysis: Workforce Intelligence Network

Job postings made by employers in Livingston County indicate a high school diploma or GED as the most indemand minimum education level during Q4 2018.

Over a quarter (27 percent) of the 8,053 job postings in Livingston County indicated a need for candidates with at least a high school diploma or GED. Another 11 percent of these postings were looking for applicants with a bachelor's degree. Higher education attainment tends to lead to more lucrative opportunities, but many entry level opportunities exist for each educational attainment level. As only 45 percent of job postings identified a minimum education level, education requirements for all job openings in the county may vary somewhat.

Education Levels In-Demand Q4 2018



26.95%



Data: Emsi | Analysis: Workforce Intelligence Network

Livingston's unemployment rate is currently at 3.1 percent, up 0.01 percentage points from Q3 2018.

As of Q4 2018, employment increased since Q3 2018, while the labor force grew between quarters as well. The growth in labor force participants was nearly the size of the increase in workers, causing the quarterly unemployment rate to remain at 3.1 percent for both Q3 2018 and Q4 2018 as more people started to look for work. During September 2018 unemployment dropped to a monthly low of 2.9 percent. For more information about this quarter's unemployment rate and other labor market indicators, see page 4.

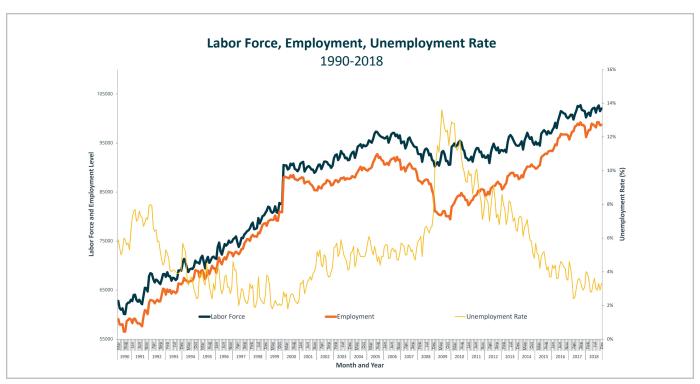
Quarterly Labor Market Data

	3rd Quarter 2018	4th Quarter 2018	3rd Quarter	
Labor Force	101,871	102,082	210	0.2%
Employment	98,674	98,870	196	0.2%
Unemployment	3,197	3,211	14	0.4%
Unemployment Rate	3.1%	3.1%	0.0%	na

High School or GED

Note: Monthly data averaged by quarter | Data: BLS

WORKFORCE OVERVIEW Livingston County | Labor Market Information Q4 2018



 ${\it Data: BLS \mid Analysis: Workforce\ Intelligence\ Network}$

Quarterly Labor Market Data Q4 2017 - Q4 2018

	4th Quarter 2017	1st Quarter 2018	2nd Quarter 2018	3rd Quarter 2018	4th Quarter 2018	Change from 3rd Quarter 2018	Percent Change from 3rd Quarter 2018	Change from 4th Quarter 2017	Percent Change from 4th Quarter 2017
Labor Force	101,642	100,601	101,487	101,871	102,082	210	0.2%	439	0.4%
Employment	98,577	96,633	98,482	98,674	98,870	196	0.2%	294	0.3%
Unemployment	3,066	3,968	3,005	3,197	3,211	14	0.4%	146	4.8%
Unemployment Rate	3.0%	3.9%	3.0%	3.1%	3.1%	0.0%	na	0.1%	na

Note: Monthly data averaged by quarter | Data: BLS

Labor Force, Employment, and Unemployment

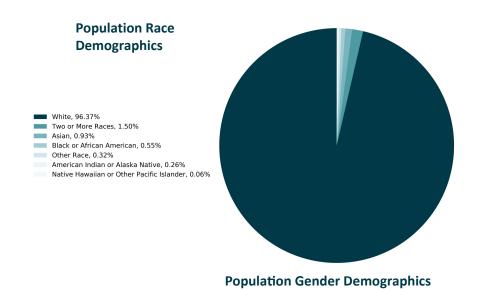
The labor market in Livingston has experienced relative stability since 2010. The labor force increased by 439 workers (0.4 percent) between Q3 2018 and Q4 2018. Employment in the county increased from Q3 2018, by 294 workers (0.3 percent). With employment increasing at a smaller rate than the labor force increased, the unemployment rate increased this quarter: the quarterly unemployment rate increased by 0.01 percentage points between Q3 2018 and Q4 2018 to 3.15 percent.

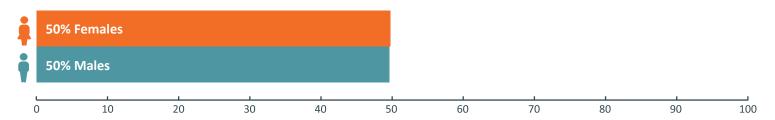
Population Demographics

According to the data from the most recent Census Bureau 2017 ACS Five Year estimates, the population in Livingston increased by half a percent between 2016 and 2017. During 2017, 186,946 people were living in the county. The sex of the populace was split evenly, with half of the population identifying as female. The majority of the population identified as white (96 percent) with the second largest number of individuals identifying as two or more races (2 percent). The county as a whole is facing an aging population; 30.5 percent of population was over the age of 55, compared to 18.0 percent under the age of 24.



0.5% Increase from 2016





Population Age Demographics



2017 Labor Force, Employment, and Unemployment Demographics

	Civilian Labor Fo	orce by Demogra	aphic Group	
	Civilian Labor	Total	Total	Unemployment
Demographic Group	Force	Employment	Unemployment	Rate
Total Population 16 +	99,332	94,666	4,569	4.6%
Sex				
Male 16+	53,846	51,513	2,333	4.3%
16-19	2,340	1,985	355	15.2%
20-24	4,727	4,233	494	10.5%
25-54	33,735	32,640	1,095	3.2%
55-64	10,072	9,762	310	3.1%
65 Plus	2,972	2,893	079	2.7%
Female 16+	45,493	43,222	2,271	5.0%
16-19	2,473	2,121	352	14.2%
20-24	4,135	3,828	307	7.4%
25-54	28,301	26,983	1,318	4.7%
55-64	8,711	8,470	241	2.8%
65 Plus	1,873	1,820	053	2.8%
Race				
White	96,351	91,833	4,432	4.6%
Black / African				
American	416	375	41	9.9%
Native American	259	244	15	5.8%
Asian	987	901	86	8.7%
Native Hawaiian /				
Pacific Islander	63	63	0	0.0%
Some Other Race	262	253	9	3.4%
Two or More Races	1,097	1,056	33	3.0%
Ethnicity				
Hispanic	2,044	1,931	112	5.5%

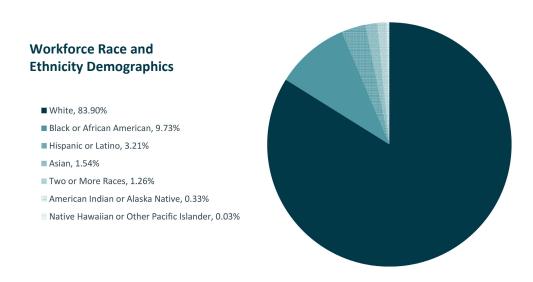
Data: American Community Survey 5-Year Estimates | Analysis: Workforce Intelligence Network

Labor Market Demographics

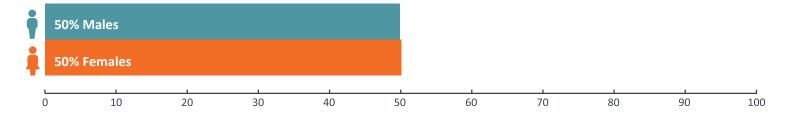
During 2017, the most recent census year, there were about 99,000 people in the labor force, meaning they were either working or looking for work, in Livingston. Slightly more than half of the county's population, 94,666 individuals (50.6 percent) living in the region were actively working during 2017. The highest unemployment rates were seen in those aged 24 years old or younger. Males under the age of 19 face an unemployment rate of 15.2 percent. Black or African American job seekers also have a difficult time finding employment, facing an unemployment rate of 9.0 percent.

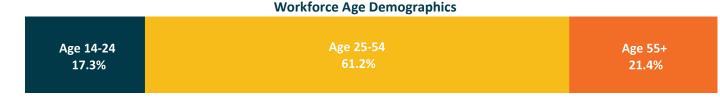
Current Workforce Demographics

While the Census Bureau data is lagged by about two years, Emsi uses predictive modeling to estimate workforce information for the previous year, allowing for more current analysis. During 2018, there were a total of 68,828 individuals working in Livingston County. The gender of workers was split nearly in half, (49.9 percent or 34,379 workers) were male, while 50.1 percent (34,450 workers) of the workforce was female. Most of those working in the region were white, accounting for 83.9 percent of the workforce, while African American or black workers accounted for 9.7 percent of the workforce. Those identifying as having a Hispanic or Latino ethnicity accounted for 3.2 percent. Eighty-three percent of the workforce was 25 years or older. Only 17 percent of the working population was under the age of 25, indicating an aging workforce in Livingston county.



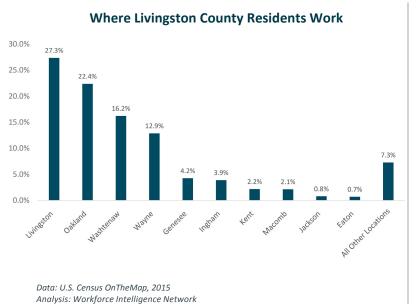
Workforce Gender Demographics

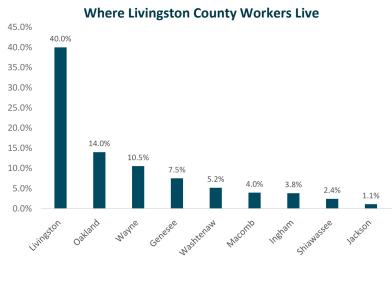




Regional Commuting Patterns

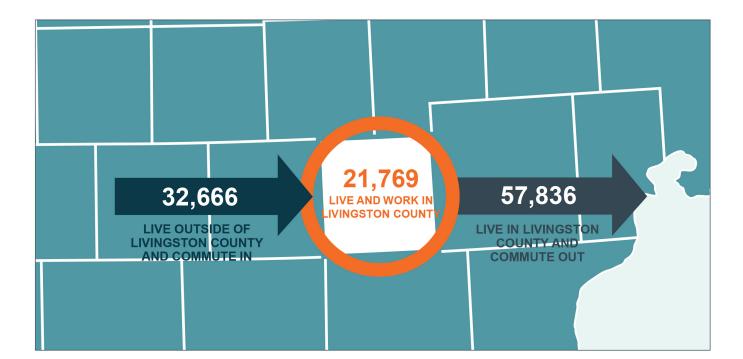
According to the most recent Onthemap data set available from the Census Bureau, during 2015, the counties workforce consisted of 79,605 residents. 21,769 (27.3 percent) of the residents lived and worked within the county, while the remaining 57,836 residents (72.7 percent) traveled outside of the county for work. There were 54,435 workers employed in the region during 2015. Of those, 32,666 workers (60.0 percent) lived outside of the region's borders and commuted in. From this information, we can see that Livingston county is a net exporter of jobs, with more workers leaving the area for employment than inwardly commuting.



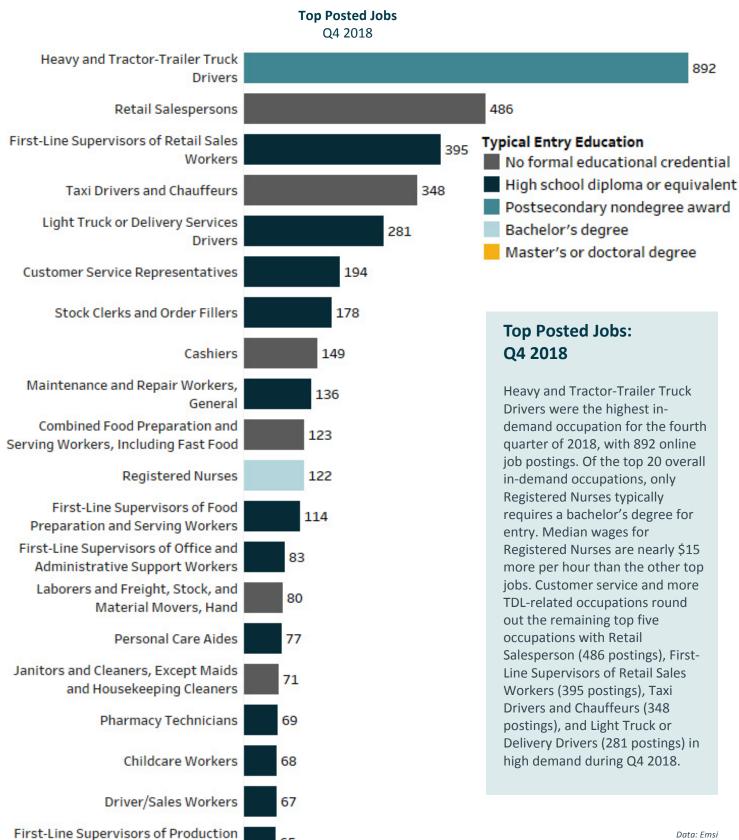


Data: U.S. Census OnTheMap, 2015

Analysis: Workforce Intelligence Network



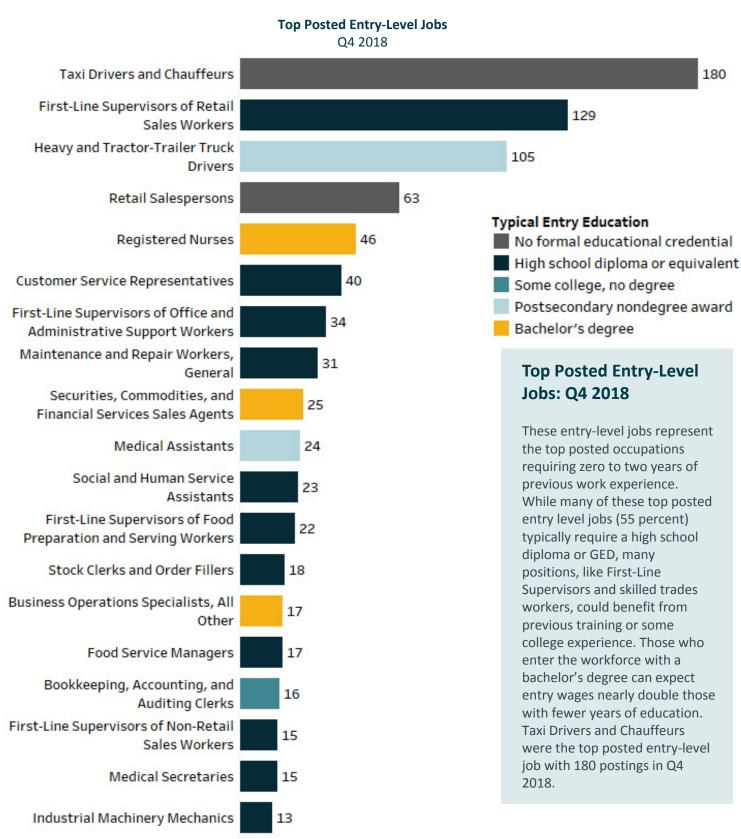
REAL-TIME DEMAND OVERVIEW **Livingston County | Top Posted Jobs | Q4 2018**



65

and Operating Workers

REAL-TIME DEMAND OVERVIEW Livingston County | Top Posted Entry-Level Jobs | Q4 2018

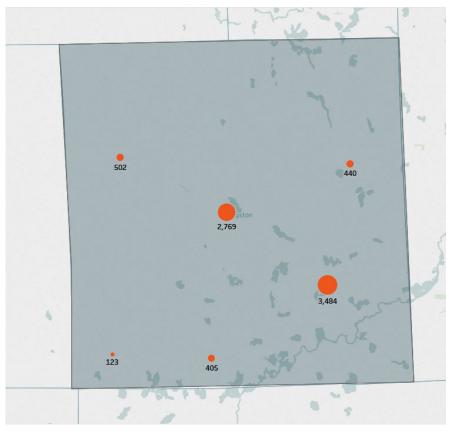


Managers, All Other

13

REAL-TIME DEMAND OVERVIEW Livingston County | Job Postings by City | Q4 2018

Job Postings by City Q4 2018



Map based on Longitude (generated) and Latitude (generated). Color shows sum of Postings/hiring intensity. Size shows sum of Unique Postings (Oct 2018–Dec 2018). Details are shown for City.

Top In-Demand Qualifications

- Commercial Driver's License (CDL)
- Certified Nursing Assistant
- Licensed Practical Nurse
- Patient Care Technician
- CompTIA Security+
- Transportation Worker Identification Credential (TWIC) Card
- Nurse Practitioner
- American Registry of Radiologic Technologists (ARRT) Certified
- Certified Medical Assistant
- Licensed Master Social Worker

Top In-Demand Skills

- Merchandising
- Restaurant Operation
- Selling Techniques
- Customer Experience
- Food Services
- Cash Register
- Warehousing
- Customer
 Satisfaction
- Accounting
- Capital Markets

Top Posting Employers*

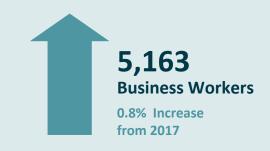
- Uber Technologies, Inc.
- Lyft, Inc.
- Express Services Inc
- McDonald's Corporation
- The Home Depot Inc
- CRST International, Inc.
- Shipt LLC
- United Parcel Service, Inc.
- Trinity Health Corporation
- Meijer, Inc.

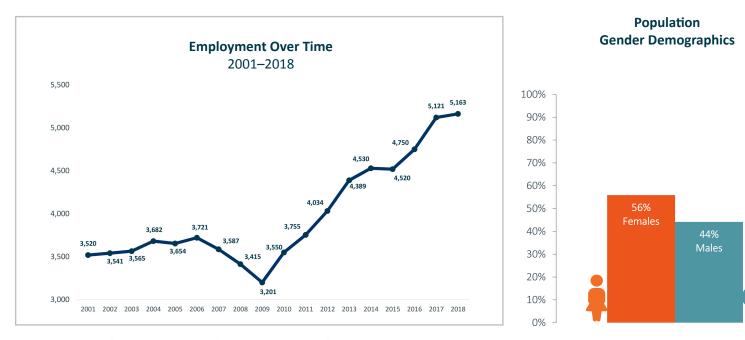
^{*}Employer names are listed as they appear in online job postings.

BUSINESS AND FINANCE OCCUPATION GROUP Livingston County | Q4 2018

Introduction

Jobs in the business and finance occupation group can be found in nearly every type of establishment/firm throughout the region. These workers need strong mathematical and accounting abilities along with project management and planning skills. Workers in this occupation group are in high demand in southeast Michigan.





Business and Finance Worker Demographics

According to the most recent Emsi data set available (2018), the business and finance occupation group shows stronger gender diversity among the occupation groups, with respect to its over 5,000 workers. Over half the working population identify as female (56 percent). In race, 89 percent of workers are white, while another 7 percent identified as black or African American. Only five percent of the working population is under the age of 25, indicating a large aging population of business and finance workers.

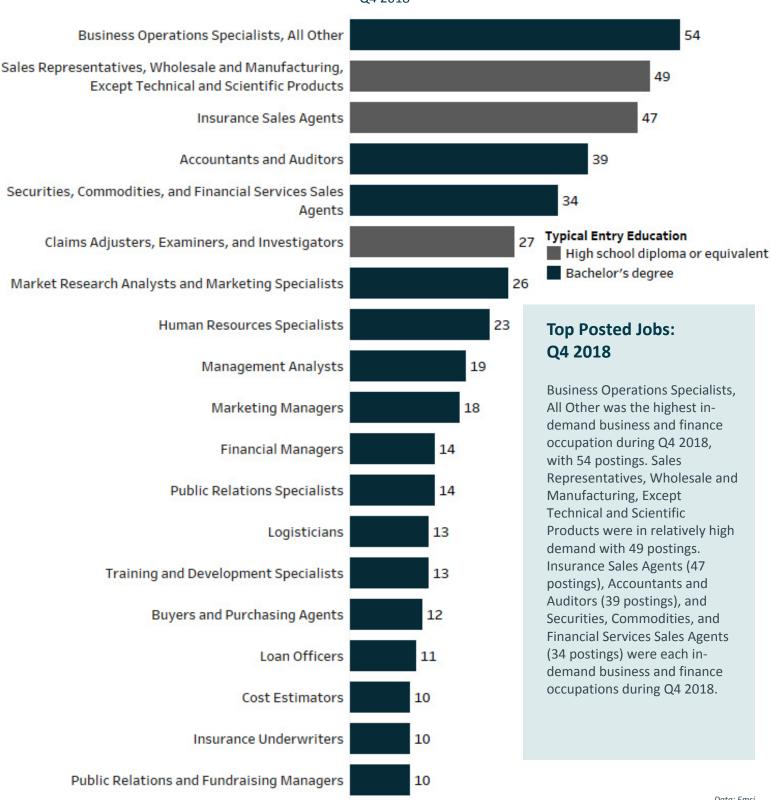






476 Business and Finance Postings: Bachelor's Degree Required for Most Business and Finance Jobs

Business and Finance Top Posted Jobs Q4 2018



Sales Engineers

Data: Emsi Analysis: Workforce Intelligence Network



High Earning Potential for Marketing Managers



Series 6 Investment License: In-Demand Business and Finance Certification

Business and Finance Wage Overview

Most business and finance related jobs offer high wages, providing a lucrative opportunity for job seekers willing to attain the necessary education. According to the Bureau of Labor Statistics (BLS), the top posted business and finance job, Business Operations Specialists, All Other, offers median hourly wages of \$31.38, translating to annual earnings of approximately \$65,000.

Wage Overview for Top Posted Business and Finance Jobs in Q4 2018

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
13-1199	Business Operations Specialists, All Other	\$15.98	\$22.16	\$31.38	\$41.68	\$52.32
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	\$13.37	\$19.60	\$28.49	\$43.26	\$59.82
41-3021	Insurance Sales Agents	\$14.30	\$18.80	\$25.01	\$39.33	\$58.37
13-2011	Accountants and Auditors	\$19.26	\$23.15	\$29.10	\$40.49	\$55.92
41-3031	Securities, Commodities, and Financial Services Sales Agents	\$14.18	\$16.82	\$24.32	\$37.59	\$75.10
13-1031	Claims Adjusters, Examiners, and Investigators	\$18.18	\$21.99	\$26.44	\$32.55	\$38.55
13-1161	Market Research Analysts and Marketing Specialists	\$12.41	\$18.54	\$26.42	\$35.96	\$49.28
13-1071	Human Resources Specialists	\$15.53	\$19.82	\$25.20	\$32.91	\$42.67
13-1111	Management Analysts	\$21.45	\$27.22	\$35.02	\$47.78	\$71.67
11-2021	Marketing Managers	\$26.46	\$34.98	\$50.04	\$66.99	\$102.39

Data: Emsi, BLS | Analysis: Workforce Intelligence Network

In-Demand Technical Skills

- Selling Techniques
- Accounting
- Customer Experience
- Demos
- Sales Process

In-Demand Education Level*

High School Diploma: 18.1%Associate Degree: 6.1%Bachelor's Degree: 34.2%

Master's Degree: 2.7%

*Not all job postings indicate the required educational attainment level, therefore the percentages found here may not add up to 100 percent

In-Demand Foundational Skills

- Management
- Sales
- Communications
- Operations
- Leadership

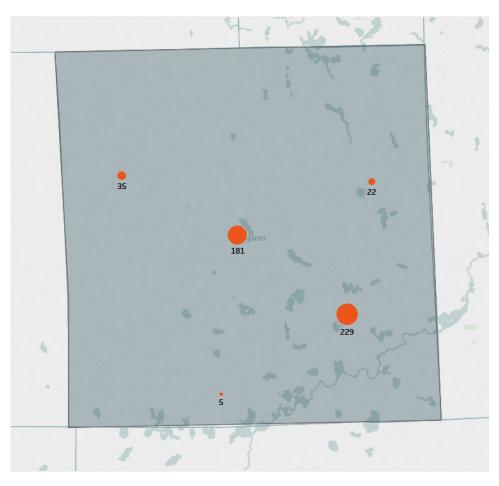
In-Demand Certifications

- Commercial Driver's License (CDL)
- CompTIA Security+
- Series 6 Investment Company and Variable Contracts License (Mutual Funds/Variable Annuities)
- Certified Professional in Learning and Performance
- Series 7 General Securities Representative License (Stockbroker)



Banks and Financial Corporations Seeking Business and Finance Workers





Map based on Longitude (generated) and Latitude (generated). Size shows sum of Unique Postings (Oct 2018–Dec 2018). Details are shown for City.

Top Job Posting Employers*

- The Hanover Insurance Group Inc
- Packaging Corporation of America
- Sig Holding Inc
- Staples, Inc.
- Work Inc
- PNC
- AtWork Group
- Top of The World Inc
- H&R Block, Inc.
- Lake Trust Credit Union

Job Postings by City

1. Brighton, MI: 229 Postings

2. Howell, MI: 181 Postings

3. Flowerville, MI: 34 Postings

4. Hartland, MI: 14 Postings

5. Pinckney, MI: 5 Postings

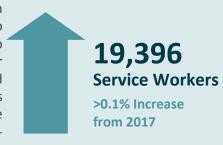
^{*}Employer names are listed as they appear in online job postings.

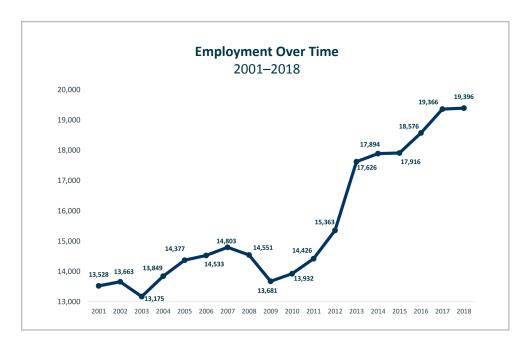


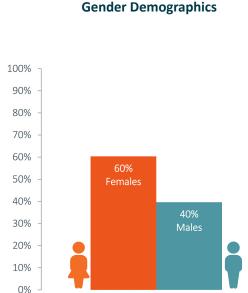
CUSTOMER SERVICE OCCUPATION GROUP Livingston County | Q4 2018

Introduction

The customer service group is the largest occupation group that WIN analyzes, both in terms of employment and online job postings. This group is of very high importance to the region because it is the first to grow when the economy expands and the first to contract in a downturn: it is often a leading indicator. The large number of postings for this occupation group are due in part to the relatively high worker turnover. As defined by WIN, this group encompasses all customer service occupations, with skills transferrable across the retail sector, the hotel industry, food and beverage service industry, call centers, and other areas. These skills are also transferrable to public-facing positions in many other occupation groups.







Population

Customer Service Worker Demographics

According to the most recent Emsi data set available (2018), having over 19,000 workers, the customer service occupation group is more diverse than other occupation groups. During 2018, 60 percent of workers identified as female. Twenty-seven percent of workers in customer service were identified as a racial minority. A quarter of the workforce (32 percent) was under the age of 24, a much higher percentage than in other occupation groups.

Race and Ethnicity Demographics

89.6% White | 4.1% Black or African American | 0.3% Asian

Population Age Demographics



Data: Emsi

Analysis: Workforce Intelligence Network



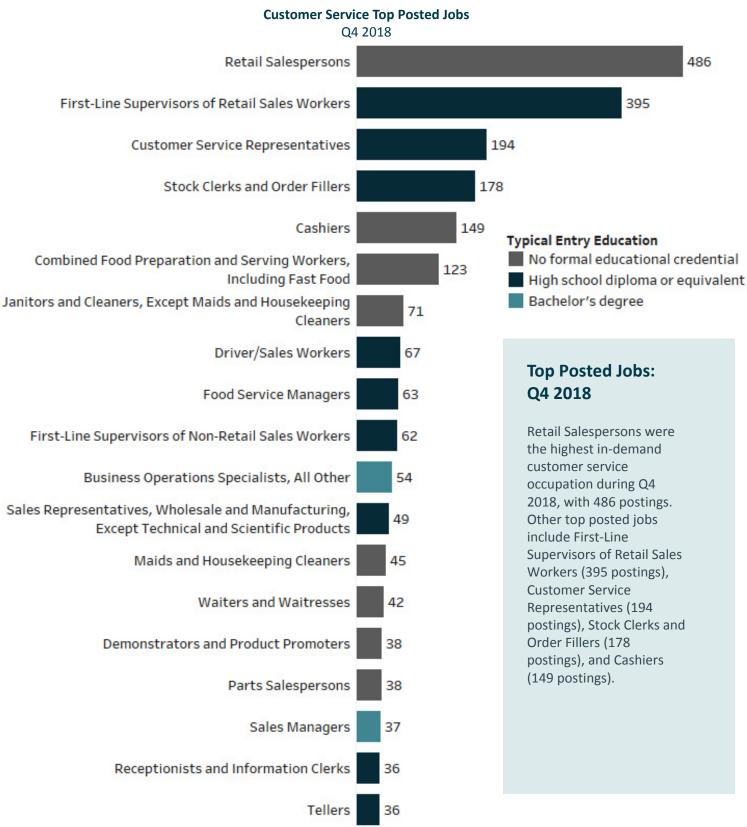
2,390 Customer Service Postings:

379 More than in Q3 2018



High School Diploma Required for Most Customer Service Jobs

Sales Representatives, Services, All Other





High Earning Potential for First-Line Supervisors of Non-Retail Sales Workers



Activity Assistant Certified: In-Demand Customer Service Certification

Customer Service Wage Overview

Despite being in high demand, most customer service related occupations offer relatively low wages according to the Bureau of Labor Statistics (BLS). However, three of the top ten posted occupations report median wages over \$15 per hour. The top posted job, Retail Salespersons, offers a median hourly wage of \$10.65 or an annual salary of over \$22,000.

Wage Overview for Top Posted Customer Service Jobs in Q4 2018

	Wage Overview for Top Posted Customer Service Jobs in Q4 2018								
Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages			
41-2031	Retail Salespersons	\$8.90	\$9.19	\$10.65	\$13.56	\$17.95			
41-1011	First-Line Supervisors of Retail Sales Workers	\$11.85	\$13.99	\$17.55	\$24.14	\$32.22			
43-4051	Customer Service Representatives	\$9.59	\$11.56	\$14.38	\$18.86	\$25.21			
43-5081	Stock Clerks and Order Fillers	\$9.11	\$9.55	\$11.21	\$14.62	\$18.45			
41-2011	Cashiers	\$8.90	\$9.07	\$9.61	\$11.27	\$13.96			
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	\$8.90	\$9.02	\$9.23	\$9.65	\$11.38			
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	\$8.91	\$9.40	\$10.91	\$13.13	\$16.63			
53-3031	Driver/Sales Workers	\$8.90	\$9.12	\$10.82	\$16.98	\$23.50			
11-9051	Food Service Managers	\$10.33	\$12.60	\$20.02	\$31.25	\$41.74			
41-1012	First-Line Supervisors of Non-Retail Sales Workers	\$14.53	\$16.89	\$21.75	\$37.66	\$50.95			

Data: Emsi, BLS | Analysis: Workforce Intelligence Network

In-Demand Technical Skills

- Merchandising
- Selling Techniques
- Cash Register
- Customer Experience
- Restaurant Operation

In-Demand Education Level*

High School Diploma: 33.0%Associate Degree: 3.3%Bachelor's Degree: 7.7%

Master's Degree: 0.4%

*Not all job postings indicate the required educational attainment level, therefore the percentages found here may not add up to 100 percent

In-Demand Foundational Skills

- Sales
- Customer Service
- Management
- Communications
- Operations

In-Demand Certifications

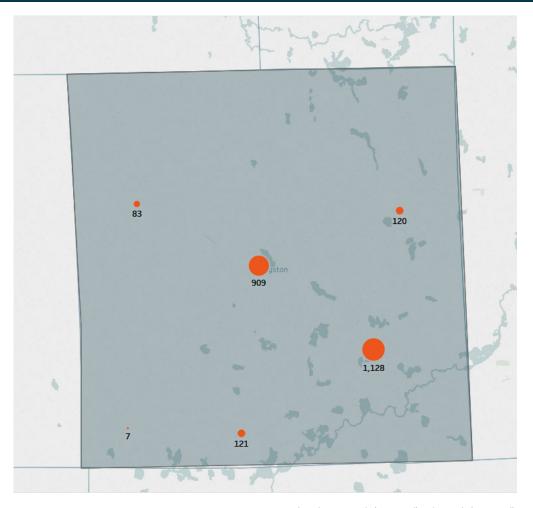
- Commercial Driver's License (CDL)
- CompTIA Security+
- Activity Assistant Certified
- Certified Case Manager
- Certified Medical Assistant



Retail Stores and Restaurants in Need of Customer Service Workers



Merchandising Skills are in High Demand



Map based on Longitude (generated) and Latitude (generated). Size shows sum of Unique Postings (Oct 2018–Dec 2018). Details are shown for City.

Top Posting Employers*

- The Home Depot Inc
- Target Corporation
- The Kroger Co
- McDonald's Corporation
- H&R Block, Inc.
- Autozone, Inc.
- Shipt LLC
- Meijer, Inc.
- O'Reilly Automotive, Inc.
- Staples, Inc.

*Employer names are listed as they appear in online job postings.

Job Postings by City

1. Brighton, MI: 1,128 Postings

2. Howell, MI: 909 Postings

3. Pinckney, MI: 121 Postings

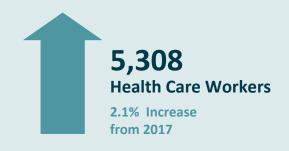
4. Hartland, MI: 120 Postings

5. Fowlerville, MI: 83 Postings

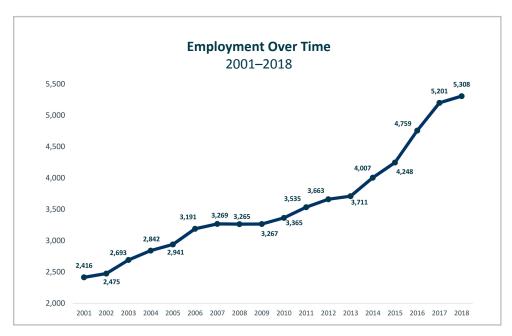
HEALTH CARE OCCUPATION GROUP Livingston County | Q4 2018

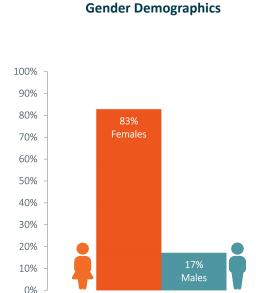
Introduction

WIN's health care occupation group includes jobs related to health care support and practitioners. Employment in this group has been consistently growing, more health care workers needed to care for Michigan's aging population and in response to regulatory and other changes. Registered nurses are routinely the most in-demand job in this group.



Population





Health Care Worker Demographics

According to the most recent Emsi data set available (2018), the Health Care occupation group employs around 5,300 workers, who are primarily female (83 percent) and between the ages of 25 and 54 (67 percent), although 21 percent of workers are over 55. The group has a similar proportion of racial minorities as the workforce as a whole, with 83 percent of workers identifying as white, 11 percent identifying as black or African American, and six percent identifying otherwise.

Race and Ethnicity Demographics

82.5% White | 11.4% Black or African American | 2.4% Asian

Population Age Demographics

Age 14-24 11.5% Age 25-54 Age 55+ 21.2%



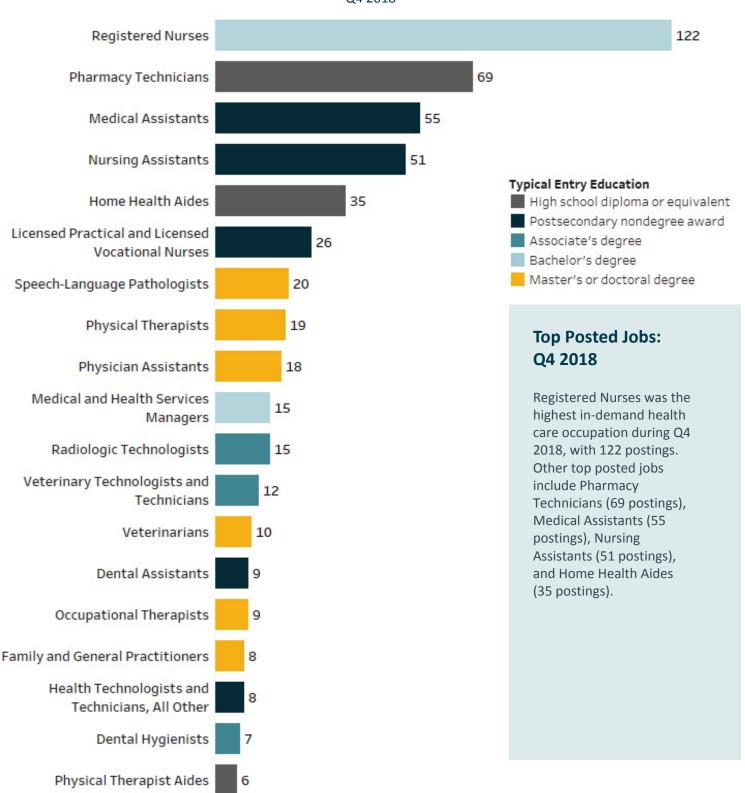
Psychiatric Technicians

583 Health Care Postings: 6 More than in Q3 2018



Bachelor's Degree Required for High Paying Health Care Jobs

Health Care Top Posted Jobs Q4 2018





High Earning Potential for Medical and Health Services Managers



Certified Nursing Assistant: Most In-Demand Health Care Certification

Health Care Wage Overview

Wages in the high-demand health care field tend to scale with both education and experience. The health care occupation group offers a relatively broad array of entry requirements and a high volume of jobs are open to candidates with less than a bachelor's degree. These jobs that require less than a bachelor's degree offer higher wages and lots of entry level openings. Registered Nurses, the top posted health care job in Q4 2018, offers a median hourly wage of \$31.13 per hour or annual salary of nearly \$65,000 according to the Bureau of Labor Statistics (BLS).

Wage Overview for Top Posted Health Care Jobs in Q4 2018

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
29-1141	Registered Nurses	\$23.26	\$26.74	\$31.13	\$35.06	\$41.67
29-2052	Pharmacy Technicians	\$11.35	\$13.72	\$17.00	\$20.38	\$29.09
31-9092	Medical Assistants	\$10.72	\$11.76	\$13.18	\$15.50	\$17.45
31-1014	Nursing Assistants	\$9.87	\$11.44	\$12.86	\$14.53	\$16.62
31-1011	Home Health Aides	\$8.90	\$9.34	\$10.42	\$11.59	\$13.49
29-2061	Licensed Practical and Licensed Vocational Nurses	\$17.83	\$19.77	\$22.81	\$25.79	\$27.60
29-1127	Speech-Language Pathologists	\$25.76	\$30.11	\$38.35	\$46.11	\$64.09
29-1123	Physical Therapists	\$29.45	\$35.03	\$42.86	\$49.75	\$67.65
29-1071	Physician Assistants	\$12.73	\$35.43	\$42.65	\$50.16	\$55.35
11-9111	Medical and Health Services Managers	\$23.63	\$29.03	\$39.24	\$51.81	\$77.26

Data: Emsi, BLS | Analysis: Workforce Intelligence Network

In-Demand Technical Skills

- Nursing
- Clinical Works
- Health Sciences
- Nursing Care
- Medical Records

In-Demand Education Level*

High School Diploma: 35.3%
Associate Degree: 16.8%
Bachelor's Degree: 17.7%
Master's Degree: 3.8%

*Not all job postings indicate the required educational attainment level, therefore the percentages found here may not add up to 100 percent

In-Demand Foundational Skills

- Management
- Communications
- Cardiopulmonary Resuscitation
- Leadership
- Problem Solving

In-Demand Certifications

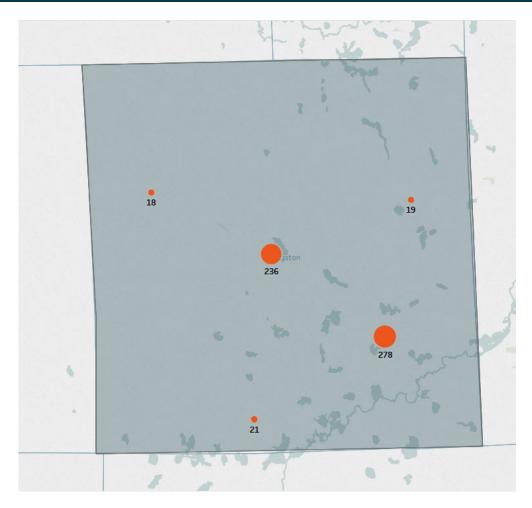
- Certified Nursing Assistant
- Licensed Practical Nurse
- Patient Care Technician
- Nurse Practitioner
- American Registry of Radiologic Technologists (ARRT) Certified



Hospitals and Pharmacies were Top Employers of Health Care Workers



Nursing and Management Skills are in High Demand



Map based on Longitude (generated) and Latitude (generated). Size shows sum of Unique Postings (Oct 2018–Dec 2018). Details are shown for City.

Top Posting Employers*

- Trinity Health Corporation
- Trilogy Health Services, LLC
- University of Michigan
- CVS Health Corporation
- Walgreens Boots Alliance, Inc.
- St Joseph Mercy Hospital
- Banfield Pet Hospital
- Davita Inc.
- Ascension Health
- Career Staff Unlimited, Inc.

Job Postings by City

1. Brighton, MI: 278 Postings

2. Howell, MI: 236 Postings

3. Pinckney, MI: 21 Postings

4. Hartland, MI: 19 Postings

5. Fowlerville, MI: 18 Postings

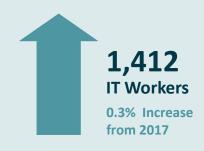
*Employer names are listed as they appear in online job postings.

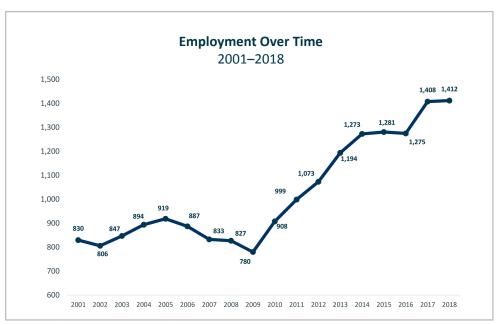


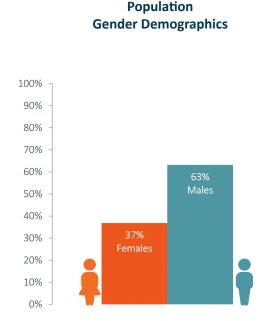
INFORMATION TECHNOLOGY (IT) OCCUPATION GROUP Livingston County | Q4 2018

Introduction

Information technology (IT) jobs include occupations that are associated with entry-level, technical, and professional careers related to the design, development, support and management of hardware, software, multimedia, and systems integration services. While the information technology group does not currently employ as many individuals as the other groups here, it is quickly growing.







IT Worker Demographics

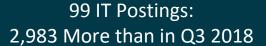
According to the most recent Emsi data set available (2018), despite having only 1,400 workers, the IT occupation group is relatively diverse. Currently, 63 percent of workers identify as male, and 85 percent identify as white. There are a broad range of organizations providing specialized training resources for female and minority IT workers throughout southeast Michigan. With the push to diversify the IT field, more opportunities are opening for women and minorities.

Race and Ethnicity Demographics 84.8% White | 7.2% Black or African American | 4.7% Asian



24

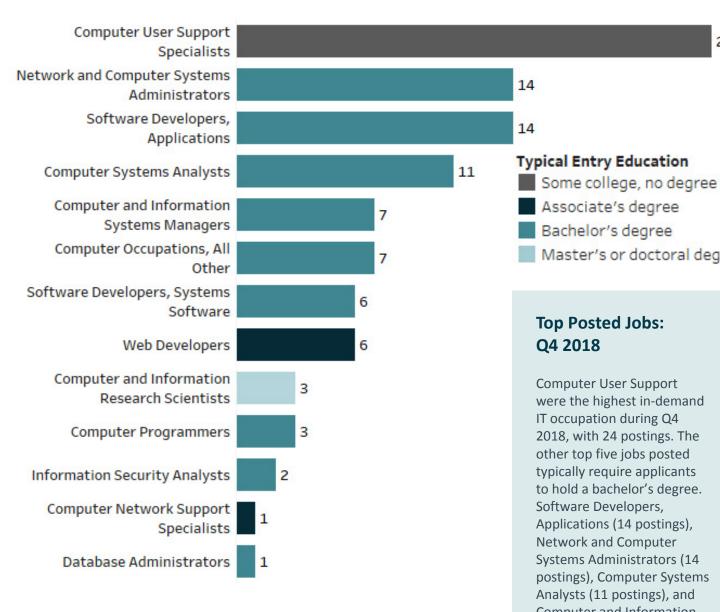






Bachelors Degree Required for Most IT Jobs

Information Technology Top Posted Jobs Q4 2018



Top Posted Jobs: Q4 2018

Associate's degree

Bachelor's degree

Master's or doctoral degree

Computer User Support were the highest in-demand IT occupation during Q4 2018, with 24 postings. The other top five jobs posted typically require applicants to hold a bachelor's degree. Software Developers, Applications (14 postings), **Network and Computer** Systems Administrators (14 postings), Computer Systems Analysts (11 postings), and Computer and Information Systems Managers (seven postings) round out the rest of the top five posted occupations.



High Earning Potential for Computer and Information System Managers



Associate Certified Electronics Technician: Most In-Demand IT Certification

IT Wage Overview

Most IT-related jobs offer high wages providing a lucrative opportunity to job seekers willing to meet the minimum education requirements related to these jobs. Software Developers, Applications, the top posted IT job in Q3 2018, offers a median hourly wage of \$38.67 per hour or over \$80,000 per year according to the Bureau of Labor Statistics (BLS).

Wage Overview for Top Posted IT Jobs in Q4 2018

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
15-1151	Computer User Support Specialists	\$13.48	\$16.64	\$21.67	\$27.27	\$35.96
15-1132	Software Developers, Applications	\$23.75	\$30.08	\$38.67	\$48.01	\$55.37
15-1142	Network and Computer Systems Administrators	\$22.83	\$28.43	\$36.18	\$44.60	\$53.26
15-1121	Computer Systems Analysts	\$22.45	\$28.51	\$36.83	\$44.77	\$54.07
11-3021	Computer and Information Systems Managers	\$34.96	\$45.31	\$56.15	\$68.82	\$86.07
15-1199	Computer Occupations, All Other	\$17.54	\$21.90	\$31.19	\$42.66	\$52.44
15-1133	Software Developers, Systems Software	\$20.79	\$28.16	\$37.27	\$46.65	\$55.95
15-1134	Web Developers	\$14.39	\$16.35	\$21.57	\$32.84	\$41.05
15-1111	Computer and Information Research Scientists	No Data Available	No Data Available	No Data Available	No Data Available	No Data Available
15-1131	Computer Programmers	\$20.80	\$23.73	\$28.39	\$35.31	\$41.26

Data: Emsi, BLS | Analysis: Workforce Intelligence Network

In-Demand Technical Skills

- SOL
- Agile Software Development
- Operating Systems
- JavaScript
- Cascading Style Sheets (CSS)

In-Demand Education Level*

High School Diploma: 13.1%
Associate Degree: 8.1%
Bachelor's Degree: 45.5%
Master's Degree: 5.1%

*Not all job postings indicate the required educational attainment level, therefore the percentages found here may not add up to 100 percent

In-Demand Foundational Skills

- Management
- Communications
- Operations
- Troubleshooting
- Written Communication

In-Demand Certifications

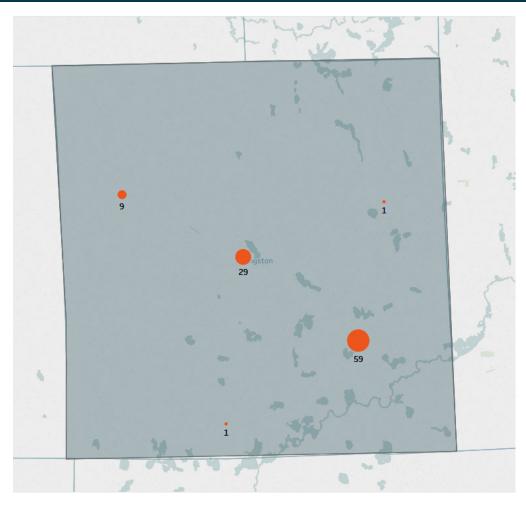
- Associate Certified Electronics Technician
- Microsoft Certified Professional
- Microsoft Certified Systems Administrator (MCSA)
- Microsoft Certified Technology Specialist
- Cisco Certified Network Associate



Suppliers and Tech Companies are Top Employers of IT Workers



Programming Language Skills are in High Demand



Map based on Longitude (generated) and Latitude (generated). Size shows sum of Unique Postings Oct 2018–Dec 2018). Details are shown for City.

Top Posting Employers*

- Lake Trust Credit Union
- Army National Guard
- Best Buy Co., Inc.
- Sig Holding Inc
- Locy Solutions Inc
- Teksystems, Inc.
- Dataspace, Incorporated
- Top of The World Inc
- Robert Bosch Tool Corporation
- Ignite

Job Postings by City

1. Brighton, MI: 59 Postings

2. Howell, MI: 29 Postings

3. Flowerville, MI: 9 Postings

4. Hartland, MI: 1 Postings

5. Pinckney, MI: 1 Postings

 $^{{\}it *Employer names are listed as they appear in online job postings}.$



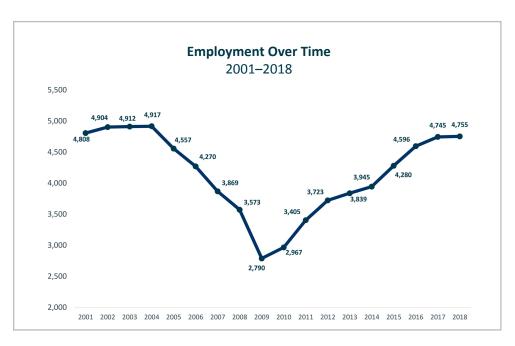
SKILLED TRADES AND TECHNICIANS (MANUFACTURING) OCCUPATION GROUP Livingston County | Q4 2018

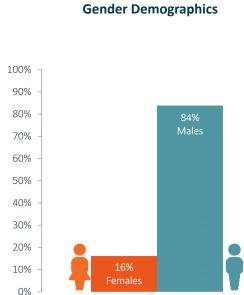
Introduction

WIN's technicians/skilled trades category includes jobs related to advanced manufacturing. Southeast Michigan has more demand for skilled-trades labor, such as CNC machinists and welders, than almost anywhere else in the country.

NOTE: Skilled trades related to construction and assembly are not included in this cluster, as the focus is on advanced manufacturing only.







Population

Skilled Trades and Technicians Worker Demographics

According to the most recent Emsi data set available (2018), the Skilled Trades occupation group employs about 158,000 workers in Livingston county. A majority of workers are white males between the ages of 25 and 54. Additional outreach may be necessary in the near future, as at 25.6 percent, the group has a somewhat higher proportion than average of workers over age 55.

Race and Ethnicity Demographics

82.5% White | 11.9% Black or African American | 1.3% Asian

Population Age Demographics

Age 14-24 8.8% Age 25-54 Age 55+ 69.4% 21.8%

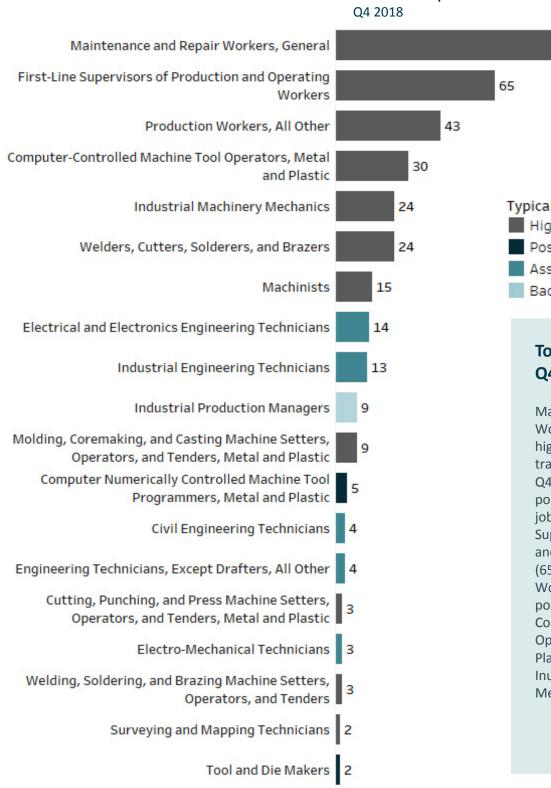






Vocational Training Required for Most Skilled Trades Jobs

Skilled Trades and Technicians Top Posted Jobs



Mechanical Engineering Technicians | 1

Typical Entry Education

High school diploma or equivalent

136

- Postsecondary nondegree award
- Associate's degree
- Bachelor's degree

Top Posted Jobs: Q4 2018

Maintenance and Repair Workers, General were the highest in-demand skilled trades occupation during Q4 2018, with 136 postings. Other top posted jobs include First-Line Supervisors of Production and Operating Workers (65 postings), Production Workers, all Other (43 postings), Computer-Controlled Machine Tool Operators, Metal and Plastic (30 postings), and **Inustrial Machinery** Mechanics (670 postings).



High Earning Potential for Industrial Production Manager



7 postings listed certifications in-demand: Top Certification- Certified First Responder

Skilled Trades and Technicians Wage Overview

Half of the top ten in-demand skilled trades occupations have median wages above \$20 per hour according to the Bureau of Labor Statistics (BLS). Maintenance and Repair Workers, General, the top posted skilled trades job in Q4 2018, offers a median hourly wage of \$15.26, which translates to an annual salary of nearly \$32,000.

Wage Overview for Top Posted Skilled Trades and Technicians Jobs in Q4 2018

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
49-9071	Maintenance and Repair Workers, General	\$9.96	\$12.18	\$15.26	\$20.06	\$25.76
51-1011	First-Line Supervisors of Production and Operating Workers	\$17.55	\$22.33	\$29.67	\$38.54	\$48.25
51-9199	Production Workers, All Other	\$9.06	\$14.03	\$16.85	\$21.74	\$28.14
51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic	\$11.73	\$14.25	\$18.52	\$21.79	\$26.15
49-9041	Industrial Machinery Mechanics	\$14.94	\$19.25	\$24.02	\$29.85	\$36.71
51-4121	Welders, Cutters, Solderers, and Brazers	\$11.99	\$14.23	\$16.60	\$20.31	\$24.51
51-4041	Machinists	\$11.71	\$15.05	\$19.35	\$23.91	\$27.43
17-3023	Electrical and Electronics Engineering Technicians	\$15.35	\$19.47	\$26.16	\$30.81	\$36.65
17-3026	Industrial Engineering Technicians	\$16.88	\$20.22	\$24.23	\$30.09	\$35.58
11-3051	Industrial Production Managers	\$32.49	\$41.05	\$51.91	\$64.79	\$82.53

Data: Emsi, BLS | Analysis: Workforce Intelligence Network

In-Demand Technical Skills

- HVAC
- Machining
- Restaurant Operation
- Lathes
- Continuous Improvement Process

In-Demand Education Level*

High School Diploma: 38.5%Associate Degree: 7.3%Bachelor's Degree: 8.2%

*Not all job postings indicate the required educational attainment level, therefore the percentages found here may not add up to 100 percent

In-Demand Foundational Skills

- Management
- Operations
- Troubleshooting
- Communications
- Interpersonal Skills

In-Demand Certifications

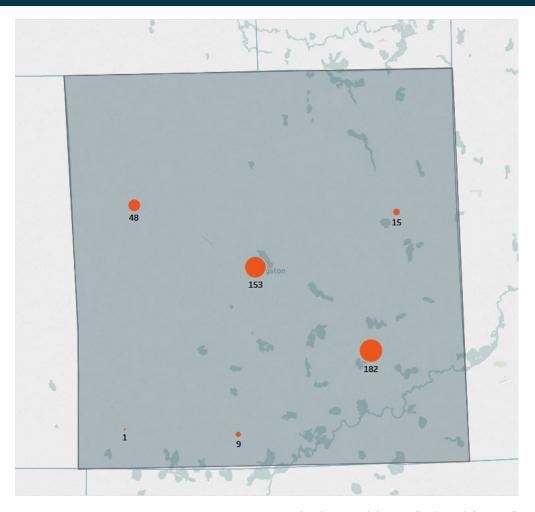
- Certified First Responder
- Commercial Driver's License (CDL)
- CompTIA Security+
- Measurement Uncertainty
- Transportation Worker Identification Credential (TWIC) Card



Staffing Agencies and Manufacturers: Top Employers of Skilled Trades Workers



HVAC and Management Skills are in High Demand



Map based on Longitude (generated) and Latitude (generated). Size shows sum of Unique Postings (Oct 2018–Dec 2018). Details are shown for City.

Top Posting Employers*

- Express Services Inc
- McDonald's Corporation
- Trillium Staffing
- Impact Management Services, Inc.
- Aerotek, Inc.
- Kelly Services, Inc.
- Qualified Staffing Inc
- Trescal, Inc.
- Cracker Barrel Old Country Store, Inc.
- TRW LTD

*Employer names are listed as they appear in online job postings.

Job Postings by City

1. Brighton, MI: 182 Postings

2. Howell, MI: 153 Postings

3. Fowlerville, MI: 48 Postings

4. Hartland, MI: 15 Postings

5. Pinckney, MI: 9 Postings

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