



Missouri Occupation Brief Information Technology Careers

There is a high demand for **Information Technology (IT)** occupations across the state of Missouri. IT professionals interact with every level of an organization's structure, and are drivers of innovation at most businesses. Technology now connects people and businesses on a global scale, and an unprecedented number of firms of all types and sizes need help with information technology products. Almost 9 in 10 (88%) industries in Missouri employ over 81,000 people in information technology occupations.

Top Employing Industries for IT Occupations

NAICS code	NAICS Title
541	Professional, Scientific, and Technical Services
551	Management of Companies and Enterprises
561	Administrative and Support Services
518	Data Processing, Hosting, and Related Services
611	Education Services
517	Telecommunications
524	Insurance Carriers and Related Activities
423	Merchant Wholesalers, Durable Goods
522	Credit Intermediation and Related Activities
910	Federal Government

Source: 2012 Occupational Employment Statistics

IT is in demand and pays well

Current demand for these occupations is high. From January 1, 2013 to December 31, 2013 there were 34,715 on-line job ads for selected information technology occupations (Burning Glass Technologies). IT occupations accounted for 3.2% of existing jobs in 2012, yet 11% of job ads over the past year were in IT. Employment in these occupations is expected to grow over time. From 2010-2020 IT occupational employment is projected to grow by 9.6%, compared to a growth rate of 8.8% for all occupations. Workers in Information Technology occupations benefit from lower unemployment rates and higher wages. In December 2013, the national unemployment rate for computer and mathematical occupations was 3.8%, compared to a rate of 6.5% for all occupations (BLS, Current Population Survey). Occupational Employment Statistics (2012) data shows the average wage in Missouri for selected IT occupations was \$73,483, compared to an average annual wage of \$41,159 for all occupations. Workers in IT occupations are more likely to have a better career path in terms of pay and job security.

IT Career Pathway

Getting Started in Information Technology

Although many IT jobs require an associates or bachelors degree, there are opportunities for entry level employment as well. Using Burning Glass Technologies, on-line job postings for IT occupations were analyzed. Of the job postings that specified a required or preferred education level, 40% of job ads for Computer User Support Specialists and 81% of job ads for Computer Operators requested only a high school degree, making these good entry level occupations for people wanting a career in Information Technology.

2012 Average Annual Wages

All Occupations	\$41,159
Computer User Support Specialists	\$45,440
Computer Operators	\$43,210

Source: 2012 Occupational Employment Statistics

Employers in a wide spectrum of industries are hiring Computer User Support Specialists and Computer Operators. In 2013 there were 3,456 on-line job postings in 63 different industries for the two entry level IT occupations.

Top Industries for Entry Level Occupations

Industry	Job Openings
Professional, Scientific, And Technical Services	380
Electronics And Appliance Stores	206
Administrative And Support Services	123
Hospitals	105
Insurance Carriers And Related Activities	94
Credit Intermediation And Related Activities	70
Educational Services	65
Securities And Other Financial Activities	64
Merchant Wholesalers, Nondurable Goods	62
Publishing Industries (except Internet)	56

Source: Labor Insight Burning Glass, 01/01/2013 - 12/31/2013.

Over 16,000 people in Missouri are currently employed as Computer User Support Specialists and Computer Operators, and employment is projected to grow 6.6% from 2010-

2020. Wages for these occupations are higher than average. With solid growth and wages as well as low unemployment, Information Technology is the perfect choice for a worker starting on their career path.

Top Employers

All IT Occupations	Entry Level IT Occupations
Monsanto	Best Buy
The Boeing Company	IBM
IBM	Monsanto
Scottrade Incorporated	Scottrade Incorporated
Deloitte Development LLC	Teletech
Enterprise Rent-a-Car	Charter Communications
Levi Ray & Shoup Incorporated	Levi Ray & Shoup Incorporated
Savis	Thomson Reuters
Perficient Incorporated	Csss.Net
Accenture	The Boeing Company

Source: Labor Insight Burning Glass, 01/01/2013 - 12/31/2013.

IT Career Pathway

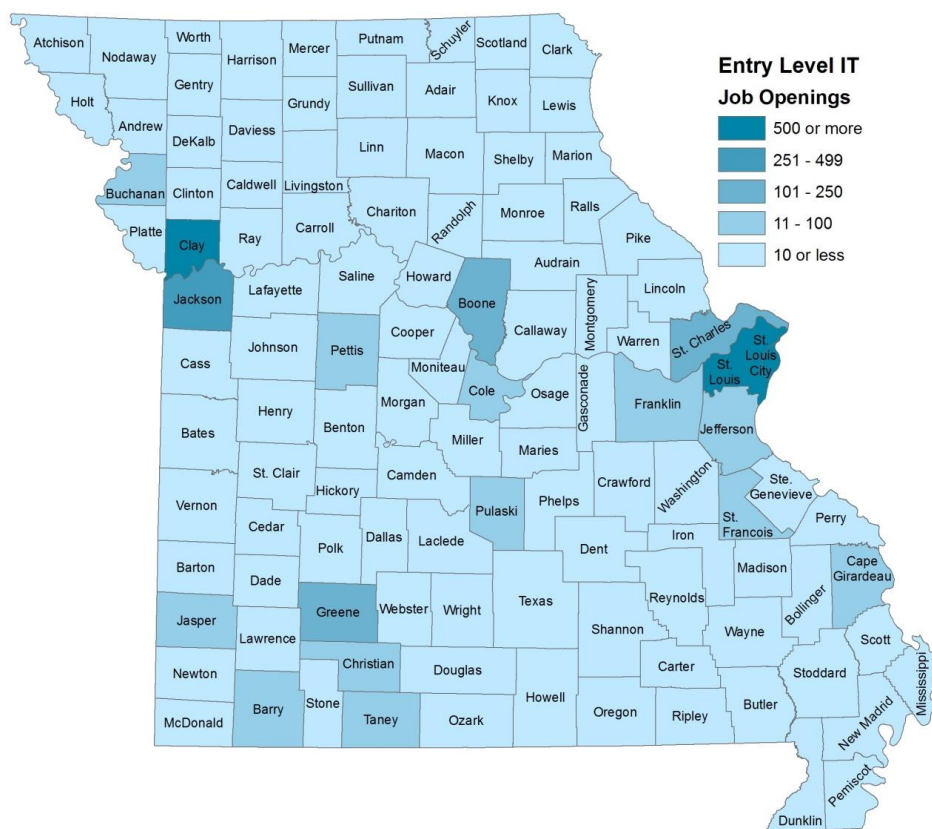
Where are the Entry Level IT jobs

Most IT jobs exist in St. Louis and Kansas City due to their larger population and concentration of company headquarters and professional services. Entry level IT jobs are found in large metropolitan areas along with concentrations of employment in the Southwest and Central part of the state.

Missouri Burning Glass Job Postings

Calendar Year 2013

Area	All IT Occupations		Entry-level IT	
	Job Ads	Percent	Job Ads	Percent
State	34,715	100%	3,456	100%
St. Louis	21,529	62%	1,758	51%
Kansas City	8,405	24%	819	24%
Remainder of State	4,781	14%	879	25%



Source: Labor/Insight (Burning Glass Technologies)

Skills and Certificates

Both basic and advanced computer skills, such as Excel and SQL, are being requested by employers in online job ads. Mastering basic skills is common in all jobs, basic skills are essential in gaining entry level employment for continued career success. Several soft skills such as communication, writing, and organizational skills rank in the top 10 requested skills for all levels of IT occupations.

IT Career Pathway

Certificates are a key component to a career in Information Technology, and these certificates can be obtained without having to pursue the normal higher education path. Training for IT occupations and certificates is available through community colleges, universities, and self guided online learning modules. Not only are beginning, or entry level, certifications available through online study; but most Certificate programs have a “stepping stone” structure that allows students to continue their education in Information Technology, and further their career along the way. The most common

requested certificates for entry level IT jobs are through CISCO and Microsoft. Beginning level certificates such as the Cisco Certified Entry Networking Technician (CCENT), the Microsoft Technology Associate (MTA) or the CompTIA A+ certificate can be obtained through specialized classroom training sessions, or online at the students own pace and schedule. Entry level certificates can be obtained with as little as 2-3 months of study and \$200-\$300, including the cost of testing fees and study materials. Testing centers for these certificates are located throughout the state. They offer testing in a variety of IT disciplines, at all levels of certification.

All IT Occupations	Entry Level IT Occupations
Top Baseline Skills	
Communication Skills Writing Organizational Skills Problem Solving Troubleshooting Leadership Project Management Planning Microsoft Windows Research	Communication Skills Troubleshooting Customer Service Problem Solving Organizational Skills Writing Microsoft Windows Microsoft Office Research Microsoft Excel
Top Software Skills	
Microsoft Windows Microsoft Office Microsoft Excel Microsoft SQL Microsoft Powerpoint UNIX LINUX Oracle ITIL	Technical Support Repair Help Desk Support Hardware and Software Installation SQL Consumer Electronics IT Support Printers UNIX LINUX
Top Certifications	
Cisco Certified Network Associate Microsoft Certified Systems Engineer (MCSE) Project Mangement Certification (E.G. PMP) Cisco Certified Network Professional (CCNP) Certified Information Systems Security Professional Microsoft Certified IT Professional (MCITP) Cisco Certified Internet Work Expert (CCIE) IT Infrastructure Library Certified Public Accountant SCRUM	Certified A+ Technician Microsoft Certified Systems Engineer (MCSE) Network+ Certified Microsoft Certified Professional (MCP) Microsoft Certified Desktop Support Technician IT Infrastructure Library CISCO Certified Network Associate Microsoft Certified IT Professional (MCITP) Certified Public Accountant Security+
<i>Source: Labor Insight Burning Glass, 01/01/2013 - 12/31/2013.</i>	

IT Career Pathway

St. Louis

Most job openings for entry level IT occupations are found in St. Louis and Kansas City. Almost 45,000 people are employed in IT occupations in the St. Louis area. Employment in these occupations is expected to grow over time. From 2010-2020 IT occupational employment is projected to grow by 8.8%, compared to a growth rate of 6.3% for all occupations. According to Burning Glass Real Time data there were 21,529 job postings for IT jobs in St. Louis in 2013. Occupational Employment Statistics (2012) data shows the average wage in St. Louis for IT occupations was \$78,545, compared to an average annual wage of \$45,745 for all occupations. Wages for entry level IT occupations are strong as well.

2012 Average Annual Wages

St. Louis WIA

All Occupations	\$45,745
Computer User Support Specialists	\$49,251
Computer Operators	\$45,404

Source: 2012 Occupational Employment Statistics

According to 2012 OES data, over 7,800 people are employed as Computer User Support Specialists and Computer Operators in the St. Louis WIA, and current demand for these occupations is high as well. Employers in a wide spectrum of industries are hiring Computer User Support Specialists and Computer Operators. In 2013 there were 1,758 on-line job postings in 52 different industries for the two entry level IT occupations.

Top Employers

Entry Level IT Occupations

Best Buy
Monsanto
Scottrade Incorporated
Thomson Reuters
The Boeing Company
Levi Ray & Shoup Incorporated
Charter Communications
Savvis
Ascension Health
Accenture

Source: Labor Insight Burning Glass, 01/01/2013 - 12/31/2013.

Top Industries for Entry Level Occupations

Industry	Job Openings
Professional, Scientific, And Technical Services	143
Electronics And Appliance Stores	101
Securities And Other Financial Investments And Related Activities	58
Merchant Wholesalers, Nondurable Goods	56
Hospitals	56
Administrative And Support Services	44
Other Information Services	43
Insurance Carriers And Related Activities	41
Credit Intermediation And Related Activities	30
Transportation Equipment Manufacturing	29

Source: Labor Insight Burning Glass, 01/01/2013 - 12/31/2013.

IT occupations accounted for 4.4% of existing jobs in 2012, yet 16% of job ads over the past year were in IT. Solid growth and wages, as well as a high concentration of current job postings, make Information Technology occupations a good choice for a worker in the St. Louis area.

IT Career Pathway

Kansas City

Over 20,700 people are employed in IT occupations in the Kansas City area, and employment in these occupations is expected to grow over time. From 2010-2020 IT occupational employment is projected to grow by 12%, compared to a growth rate of 5.7% for all occupations. According to Burning Glass Real Time data there were 8,405 job postings for IT jobs in Kansas City in 2013. Occupational Employment Statistics (2012) data shows the average wage in Kansas City for IT occupations was \$75,313, compared to an average annual wage of \$44,891 for all occupations. Average wages for Computer Operators are only slightly below the average wage for all occupations in the region, while wages for Computer User Support Specialist are higher than the average.

2012 Average Annual Wages Kansas City WIA

All Occupations	\$44,891
Computer User Support Specialists	\$47,048
Computer Operators	\$42,888

Source: 2012 Occupational Employment Statistics

According to 2012 OES data, over 3,000 people are employed as Computer User Support Specialists and Computer Operators in the Kansas City WIA, and current demand for these occupations is high as well. Employers in a wide spectrum of industries are hiring Computer User Support Specialists and Computer Operators. In 2013 there were 819 on-line job postings in 39 different industries for the two entry level IT occupations.

Top Employers

Entry Level IT Occupations

Best Buy
Netsmart Technologies
CSSS.Net
Hospital Corporation of America
Cerner Corporation
Dst Systems
H&R Block
McGladrey
Allscripts
Commerce Bank

Source: Labor Insight Burning Glass, 01/01/2013 - 12/31/2013.

Top Industries for Entry Level Occupations

Industry	Job Openings
Professional, Scientific, And Technical Services	99
Electronics And Appliance Stores	48
Administrative And Support Services	35
Publishing Industries (except Internet)	30
Hospitals	26
Credit Intermediation And Related Activities	21
Computer And Electronic Product Manufacturing	20
Data Processing, Hosting, And Related Services	18
Insurance Carriers And Related Activities	18
Educational Services	13

Source: Labor Insight Burning Glass, 01/01/2013 - 12/31/2013.

IT occupations accounted for 4% of existing jobs in 2012, yet 11% of job ads over the past year were in IT. Solid growth and wages, as well as a high concentration of current job postings, make Information Technology occupations a good choice for a worker in the Kansas City area.

Data for this analysis has been extracted using Burning Glass Technologies Labor/Insight™ tool which collects information from over 17,000 web sources, including job boards, newspapers, and employer websites. Missouri Economic Research and Information Center (MERIC) uses this data to compile and publish reports for the State and Labor Market Regions. While this analysis presents a broad picture of hiring activity and serves as a measure of labor demand, it does not capture openings that are filled through other networks