

Labor Market Demand & Hiring Practices: Information Technology

Guiding Questions

Schools and Postsecondary Partners

- How do CTE programs currently prepare students for these practices, and where are opportunities for growth and further alignment?

Industry Partners

- How does your experience and insight add depth and understanding of these trends?
- What resources, skills and opportunities do you have that could help educators stay up-to-date with industry trends?

Analysis: Primary takeaways

- From 2012 to 2017, all IT job types in NYC increased in number.
- In NYC, these jobs have high median wages relative to other industries. However, many of the most common IT jobs in NYC require a Bachelors degree.
- These jobs are often secured through working with a recruiter or through applying to online job ads.
- Java programming language-related skills are especially appealing to NYC-based employers, which doesn't seem to currently be a primary focus of CTE school instruction.

How Schools Can Use This Info

- Identify lesson plans where elements of labor market info can be added to expand students' understanding of the industry
- Consider how your work readiness training needs to be improved to align with current hiring practices
- Present this information to your Self Study Group to keep your school apprised of current trends
- Consider how you can continue to grow and stay aware of industry practices through professional development

Past Trends of Unemployment

Unemployment Rate in Nov 2018

3.7% in NYC

3.5% in US

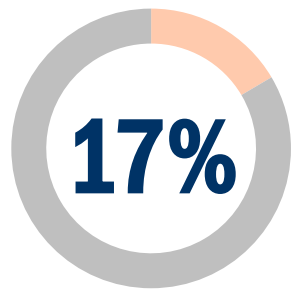
Percentage Point Decline from Nov 2016 to Nov 2018

-1.0% in NYC

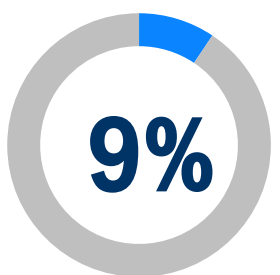
-0.9% in US

NYC Employment Top 6 Sectors, 2017

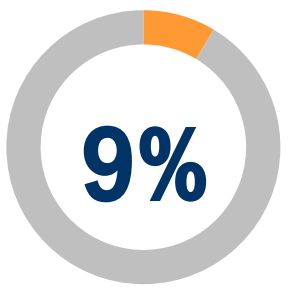
In 2017, there were approximately 4.3 Million NYC Jobs. Over half of these jobs are in the six largest sectors:



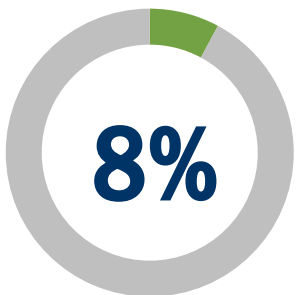
Healthcare



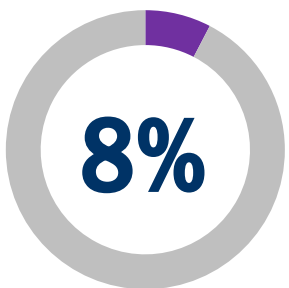
Professional Services



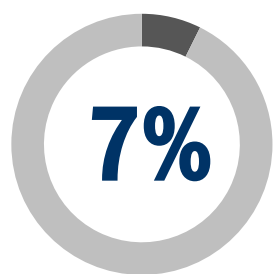
Accommodation & Food Services



Retail Trade



Finance & Insurance



Educational Services

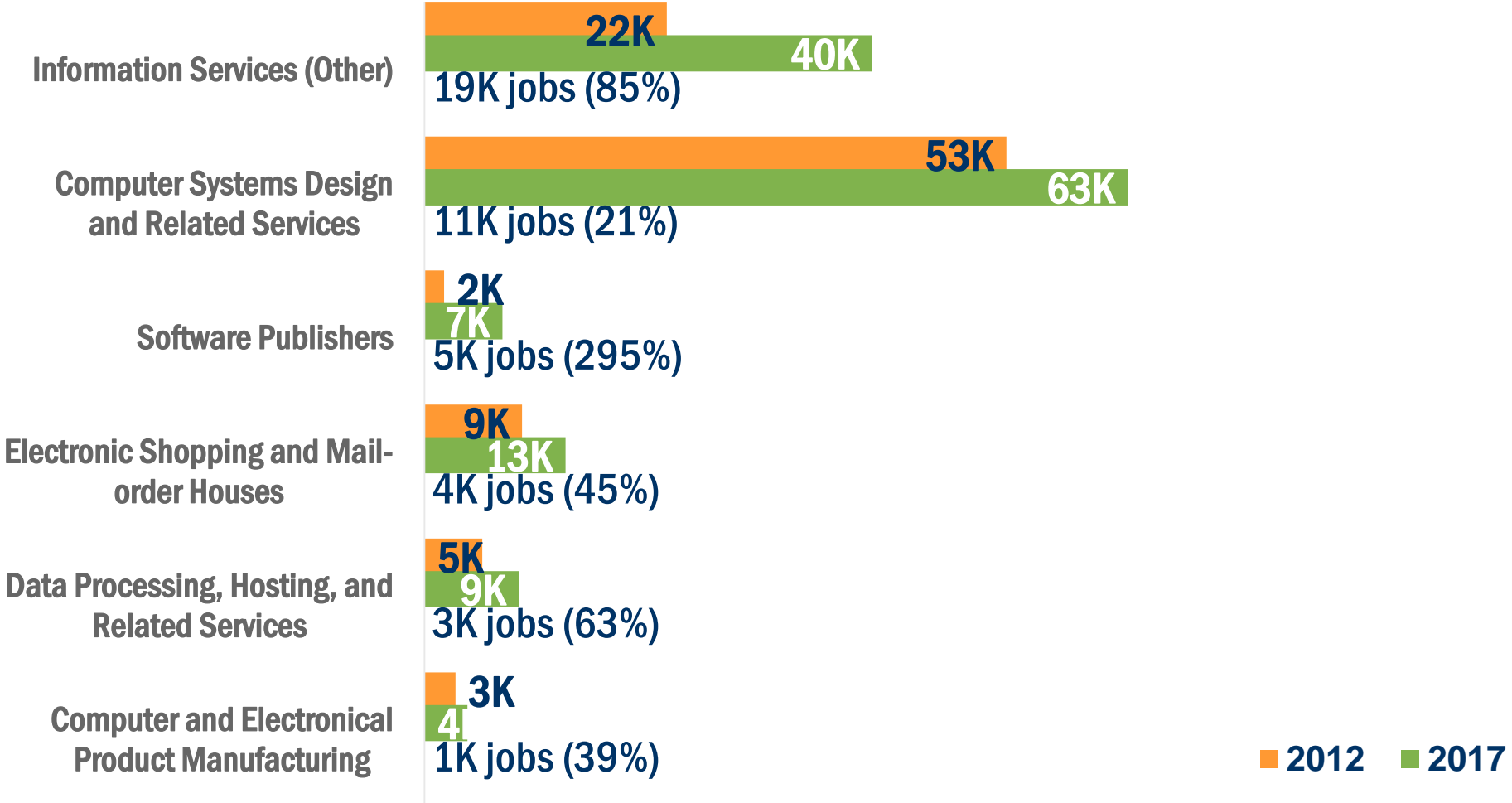
Source | NYCLMIS analysis of 2017 Annual Quarterly Census of Employment and Wages data files from U.S. Bureau of Labor Statistics. Includes all ownership. Per BLS confidentiality policy, some data (~6%) has been suppressed in order to protect the identity of employers and is therefore excluded from employment totals.

Sectors with the Greatest Projected Job Growth in NYC 2014-2024

Sector	Net Change in Job Growth
Health Care & Social Assistance	24%
Professional & Business Services	22%
Accommodation & Food Services	25%
Educational Services	14%
Construction	29%
Other Services	18%
Retail Trade	10%
Financial Actives	7%
Arts, Entertainment & Recreation	22%
Transportation & Warehousing	10%

Source | NYCLMIS analysis of 2017 Annual Quarterly Census of Employment and Wages data files from U.S. Bureau of Labor Statistics. Includes all ownership. Per BLS confidentiality policy, some data has been suppressed in order to protect the identity of employers and is therefore excluded from employment totals.

IT Employment in NYC 2012 and 2017



Source | NYCLMIS analysis of 2018 Annual Quarterly Census of Employment and Wages data files from U.S. Bureau of Labor Statistics. Includes all ownership. Per BLS confidentiality policy, some data has been suppressed in order to protect the identity of employers and is therefore excluded from employment totals.

Information Technology: Common Occupations (Sub-BA)

Occupation	Education	No. Jobs	Med. Wage
Computer User Support Specialists	Some college	22K	\$60K
Web Developers	Associate	8K	\$81K
Computer Network Support Specialists	Associate	6K	\$82K

Source | NYCLMIS analysis of statewide 2018 Q1 Occupational Employment Statistics and 2014-2024 Long-Term Occupational Employment Projections from the New York State Department of Labor.

Online Job Ads: Employers & Job Titles

Employers with the most ads:
Share of Total Online Ads 2018
20K ads (35% did not specify employers)

Most commonly advertised titles:
Share of Total Online Ads 2018
20K ads (all adds specified titles)

0.9%	JP Morgan Chase Company
0.5%	The Goldman Sachs Group, Inc.
0.4%	IBM
0.4%	Infopeople Corporation
0.4%	Gambit Technologies
0.4%	Morgan Stanley
0.3%	Hyatt
0.3%	Joseph Harry Ltd
0.3%	Columbia University
0.3%	Amazon

5.8%	Front End Developer
4.3%	Web Developer
5.5%	User Experience (UX) Designer
4.4%	User Interface (UI) Developer
3.9%	Desktop Support
1.6%	Software Development Engineer
1.5%	PHP Developer
1.4%	Help Desk Analyst
1.3%	Help Desk Technician
1.3%	Web Designer

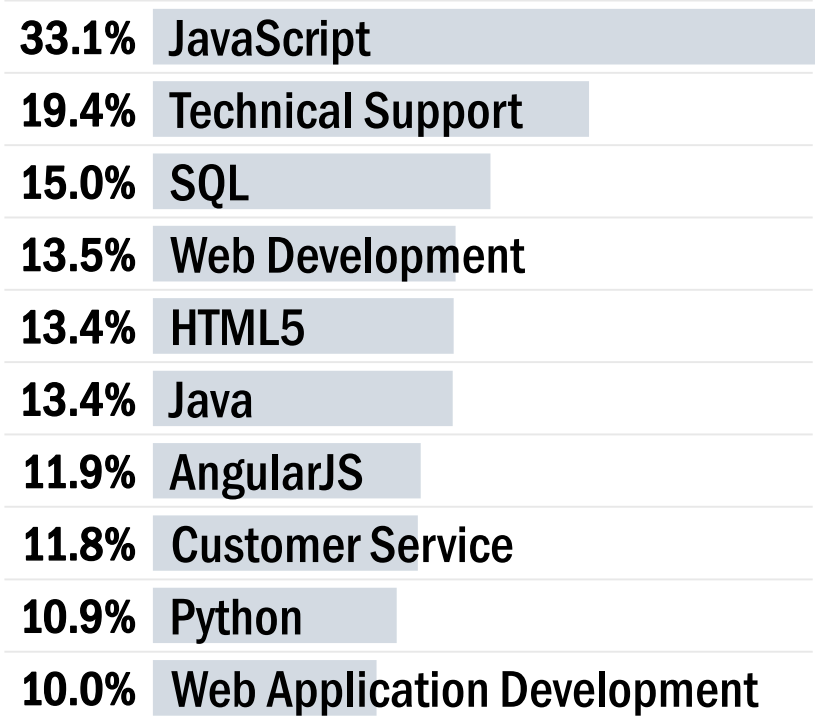
Source | NYCLMIS analysis of Burning Glass Technologies' Labor Insight.

Analysis of Online Job Ads: Skills

Most requested specialized skills:

Share of Total Online Ads 2018

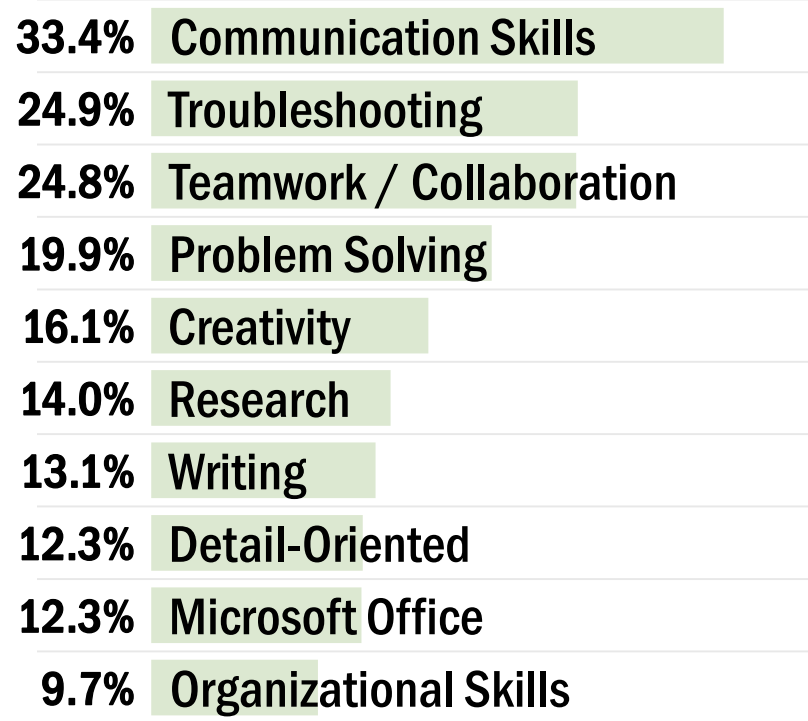
20K (6% of ads did not specify skills)



Most requested baseline skills:

Share of Total Online Ads 2018

20K ads (6% of ads did not specify skills)



Source | NYCLMIS analysis of Burning Glass Technologies' Labor Insight.

Information Technology: Job Trend Analysis, CTE Certifications

Most requested certifications:

Share of Total Online Ads 2018

20K ads (89% of ads specified certifications)

3.3%	Certified A+ Technician
2.9%	IT Infrastructure Library (ITIL) Certification
1.6%	Driver's License
1.3%	CompTIA Network+
1.2%	Microsoft Certified Professional (MCP)
1.1%	Cisco Certified Network Associate (CCNA)
0.9%	ITIL Certification
0.8%	Microsoft Certified Solutions Associate (MCSA)
0.8%	Microsoft Certified Solutions Expert (MCSE)
0.5%	Apple Certified Macintosh Technician

CTE

- CompTIA A+
- Network +
- Security +
- Mobility +
- CISCO- CCENT
- CISCO- CCNA
- Microsoft Technology Associate
- NOCTI- Computer Programming
- Advanced Placement Computer Science Principles
- Unity Certified Developer Skills -HTML, CSS, Java, PHP, MySQL

Source: Labor Insight, Burning Glass Technologies 2018, DOE-CTE School Survey

Information Technology: Common Occupations

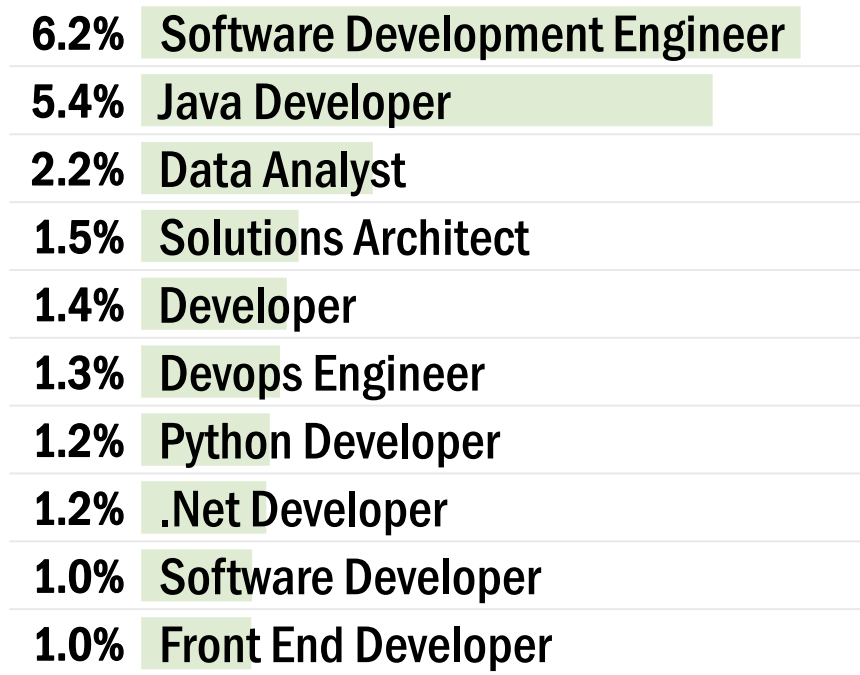
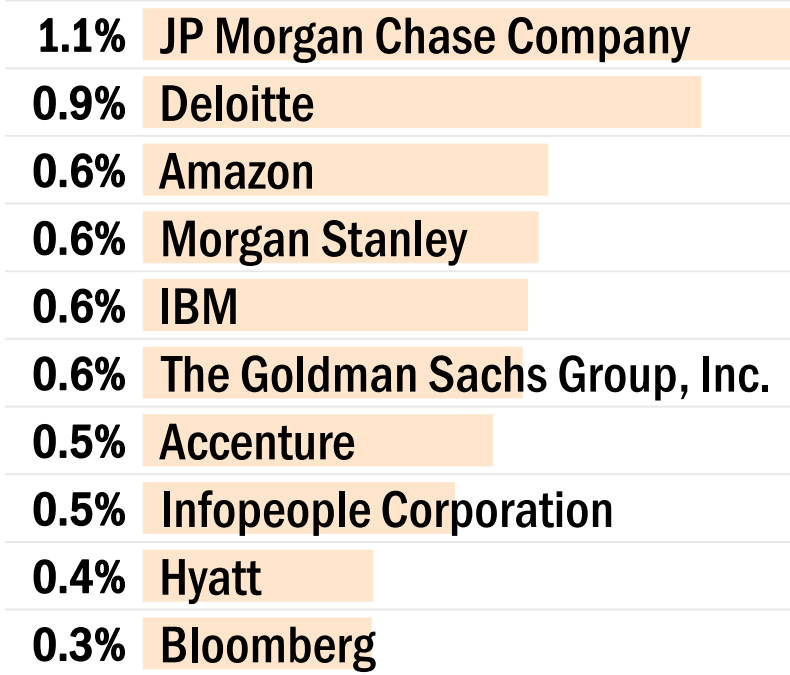
Occupation	Education	No. Jobs	Med. Wage
Software Developers, Applications	Bachelors	33K	\$122K
Computer Systems Analysts	Bachelors	25K	\$111K
Computer User Support Specialists	Some college	22K	\$60K
Network and Computer Systems Administrators	Bachelors	14K	\$101K
Software Developers, Systems Software	Bachelors	10K	\$127K
Web Developers	Associate	8K	\$81K
Computer Programmers	Bachelors	7K	\$93K
Computer Network Support Specialists	Associate	6K	\$82K
Database Administrators	Bachelors	4K	\$99K
Computer Occupations, All Other	Bachelors	1K	\$95K

Source | NYCLMIS analysis of statewide 2018 Q1 Occupational Employment Statistics and 2014-2024 Long-Term Occupational Employment Projections from the New York State Department of Labor.

Online Job Ads: Employers & Job Titles

Employers with the most ads:
Share of Total Online Ads 2018
118K ads (33% did not specify employers)

Most commonly advertised titles:
Share of Total Online Ads 2018
118K ads (all adds specified titles)



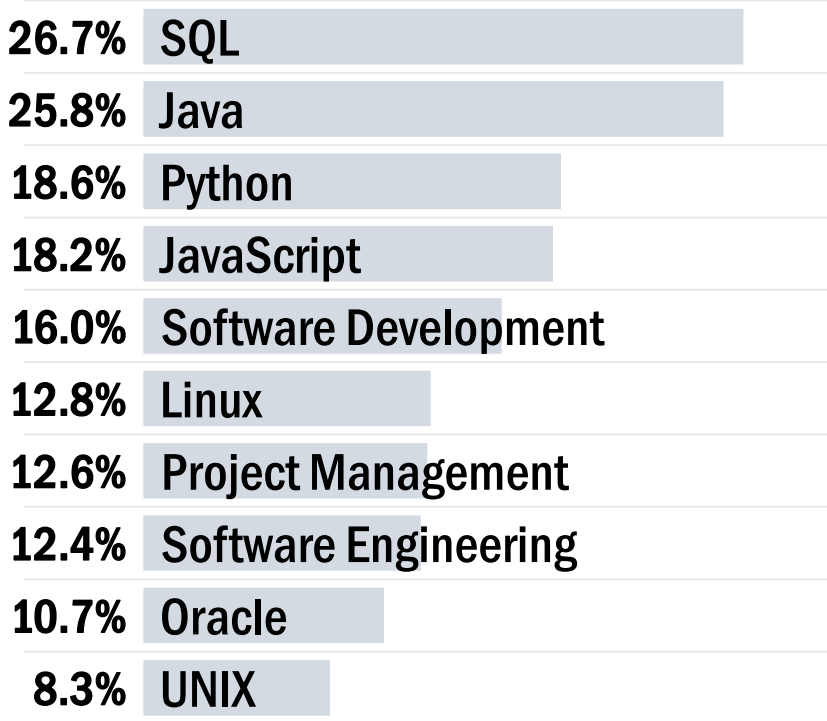
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Analysis of Online Job Ads: Skills

Most requested specialized skills:

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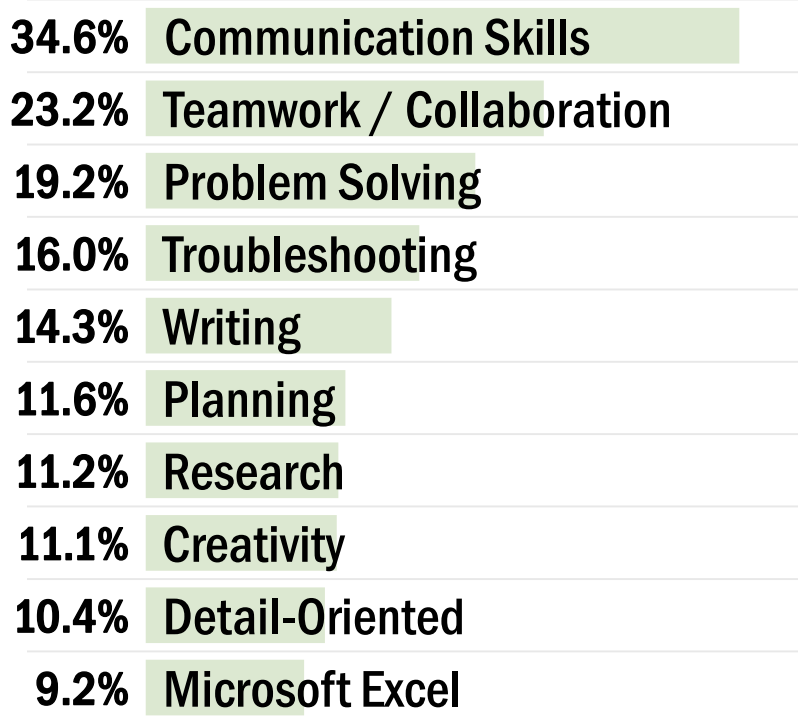
118k (6% of ads did not specify skills)



Most requested baseline skills:

Share of Total Online Ads 2018

118K ads (6% of ads did not specify skills)



Source | NYCLMIS analysis of Burning Glass Technologies' Labor Insight.

Information Technology: Job Trend Analysis, CTE Certifications

Most requested certifications:

Share of Total Online Ads 2018

118K ads (90% of ads specified certifications)

1.8%	Project Management Certification
1.7%	IT Infrastructure Library (ITIL) Certification
1.1%	Project Management Professional (PMP)
0.7%	Certified A+ Technician
0.7%	Driver's License
0.5%	Cisco Certified Network Associate (CCNA)
0.5%	Certified ScrumMaster (CSM)
0.5%	ITIL Certification
0.4%	Microsoft Certified Solutions Expert (MCSE)
0.4%	Certified Info. Systems Security Prof. (CISSP)

CTE

- CompTIA A+
- Network +
- Security +
- Mobility +
- CISCO- CCENT
- CISCO- CCNA
- Microsoft Technology Associate
- NOCTI- Computer Programming
- Advanced Placement Computer Science Principles
- Unity Certified Developer Skills -HTML, CSS, Java, PHP, MySQL

Source: Labor Insight, Burning Glass Technologies 2018, DOE-CTE School Survey

What entry level job titles do you include in your CTE coursework and career pathway conversations with students that relates to the CTE track?

1. Computer User Support Specialist
2. Computer Network Support Specialist
3. Web Designer

Source | CTE-School Survey 2018

How are candidates typically recruited in the IT industry?

1. Recruiter
2. Online Ads
3. College Fairs

Source | CTE Industry Survey 2018

How are candidates typically screened in the IT industry?

1. Screening Call
2. Certificates/Credentials
3. LinkedIn Profile

Source | CTE Industry Survey 2018

Sources | TE Industry Survey 2018

Which of the IT credentials are valued in entry level candidates in your industry?

1. CompTIA A+
2. Network +
3. Security +

How are candidates' certifications typically verified?

1. Copy of certification
2. Listed on resume

Source | CTE Industry Survey 2018

Analysis: Primary takeaways

- From 2012 to 2017, all IT job types in NYC increased in number.
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