

Indicators of Demand LMI, Technology skills and Credentials in O*NET and CareerOneStop

OWI

DNPTTA

Workforce Information and Electronic Tools



O*NET Bright Outlook (based on BLS national projections)



O*NET OnLine

Help Find Occupations Advanced Search Crosswalks Share

Browse Bright Outlook Occupations

 Bright Outlook occupations are expected to grow rapidly in the next several years, or will have large numbers of job openings.

Help Search Crosswalks



O*NET OnLine

Occupation Quick Search

Help Find Occupations Advanced Search Crosswalks Share

Browse Bright Outlook Occupations

 Bright Outlook occupations are expected to grow rapidly in the next several years, or will have large numbers of job openings.

Numerous Job Openings [Save Table \(XLS/CSV\)](#)

These occupations are projected¹ to have **100,000 or more job openings** over the period 2019-2029 for the US nationwide.

Sort by: [Code](#) [Occupation](#)

13-2011.00	Accountants and Auditors	 Bright Outlook
29-1141.01	Acute Care Nurses	
29-1141.02	Advanced Practice Psychiatric Nurses	
35-3023.01	Baristas	
35-3011.00	Bartenders	
43-3031.00	Bookkeeping, Accounting, and Auditing Clerks	
41-2011.00	Cashiers	
39-9011.00	Childcare Workers	
29-1141.04	Clinical Nurse Specialists	
47-2061.00	Construction Laborers	
35-2014.00	Cooks, Restaurant	
29-1141.03	Critical Care Nurses	
43-4051.00	Customer Service Representatives	
25-2021.00	Elementary School Teachers, Except Special Education	
35-3023.00	Fast Food and Counter Workers	





Summary Report for: 15-1252.00 - Software Developers

Updated 2021

Bright Outlook

Research, design, and develop computer and network software or specialized utility programs. Analyze user needs and develop software solutions, applying principles and techniques of computer science, engineering, and mathematical analysis. Update software or enhance existing software capabilities. May work with computer hardware engineers to integrate hardware and software systems, and develop specifications and performance requirements. May maintain databases within an application area, working individually or coordinating database development as part of a team.

Sample of reported job titles: Application Developer, Application Integration Engineer, Developer, Infrastructure Engineer, Network Engineer, Software Architect, Software Developer, Software Development Engineer, Software Engineer, Systems Engineer

This title represents an occupation for which data collection is currently underway.

View report:

[Summary](#)[Details](#)[Custom](#)[Tasks](#) | [Technology Skills](#) | [Tools Used](#) | [Detailed Work Activities](#) | [Credentials](#) | [Wages & Employment](#) | [Job Openings](#) | [Additional Information](#)

Tasks

+ 5 of 19 displayed

- ⚙ Analyze information to determine, recommend, and plan installation of a new system or modification of an existing system.
- ⚙ Analyze user needs and software requirements to determine feasibility of design within time and cost constraints.
- ⚙ Confer with data processing or project managers to obtain information on limitations or capabilities for data processing projects.
- ⚙ Confer with systems analysts, engineers, programmers and others to design systems and to obtain information on project limitations and capabilities, performance requirements and interfaces.
- ⚙ Consult with customers or other departments on project status, proposals, or technical issues, such as software system design or maintenance.

Click on the 'fire icon

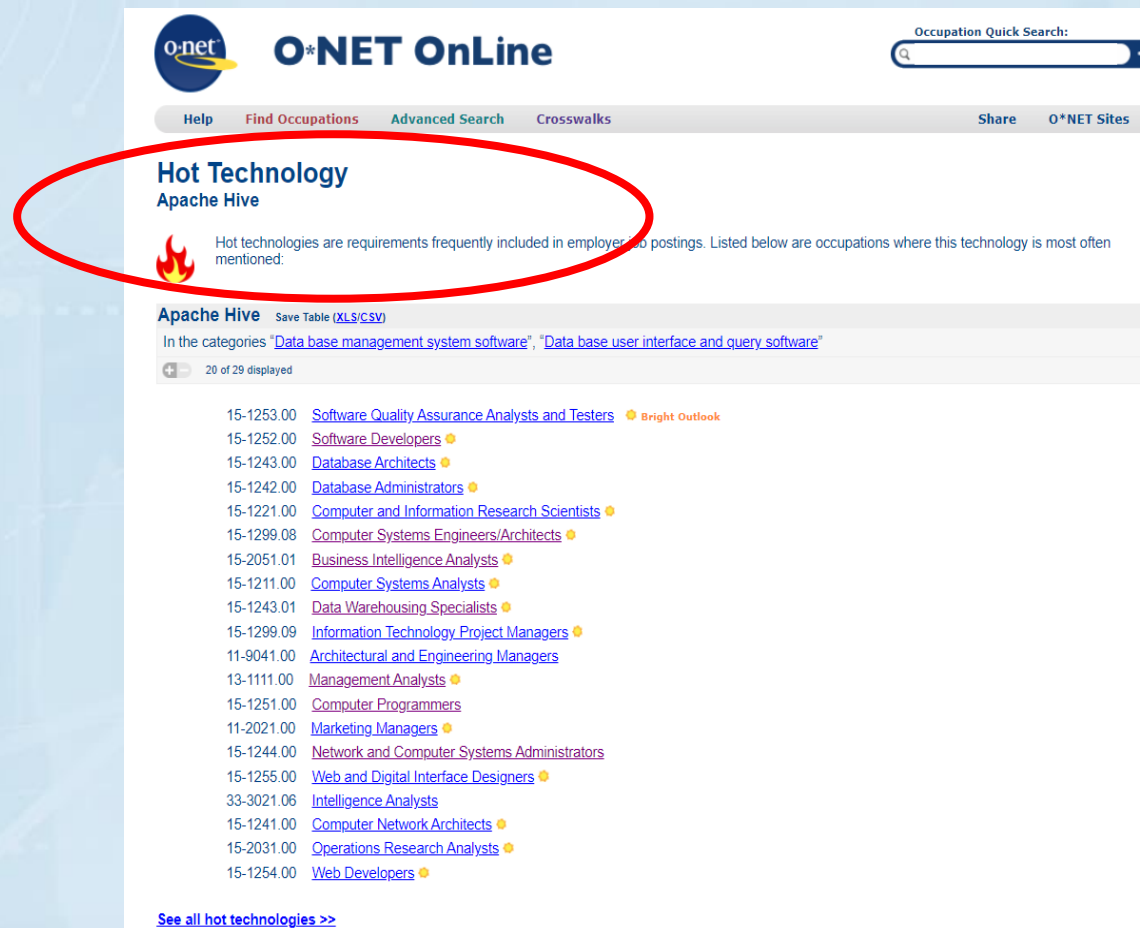
Technology Skills

+ 5 of 57 displayed [Show 9 tools used](#)

- ⚙ **Data base management system software** — Amazon DynamoDB 🔥; Elasticsearch 🔥; MongoDB 🔥; NoSQL 🔥
- ⚙ **Data base user interface and query software** — Airtable; Apache Hive 🔥; Blackboard software; MySQL 🔥
- ⚙ **Development environment software** — Advanced business application programming ABAP 🔥; Apache Ant 🔥; Common business oriented language COBOL 🔥; Go 🔥
- ⚙ **Object or component oriented development software** — Apache Spark 🔥; jQuery 🔥; Objective C 🔥; Scala 🔥
- ⚙ **Web platform development software** — Backbone.js 🔥; Google AngularJS 🔥; Microsoft ASP.NET Core MVC 🔥; React 🔥



Occupations that use a specific *hot technology*



O*NET OnLine Occupation Quick Search:

[Help](#) [Find Occupations](#) [Advanced Search](#) [Crosswalks](#) [Share](#) [O*NET Sites](#)

Hot Technology

Apache Hive

Hot technologies are requirements frequently included in employer job postings. Listed below are occupations where this technology is most often mentioned:

Apache Hive [Save Table \(XLS/CSV\)](#)

In the categories: ["Data base management system software"](#), ["Data base user interface and query software"](#)

20 of 29 displayed

15-1253.00	Software Quality Assurance Analysts and Testers	
15-1252.00	Software Developers	
15-1243.00	Database Architects	
15-1242.00	Database Administrators	
15-1221.00	Computer and Information Research Scientists	
15-1299.08	Computer Systems Engineers/Architects	
15-2051.01	Business Intelligence Analysts	
15-1211.00	Computer Systems Analysts	
15-1243.01	Data Warehousing Specialists	
15-1299.09	Information Technology Project Managers	
11-9041.00	Architectural and Engineering Managers	
13-1111.00	Management Analysts	
15-1251.00	Computer Programmers	
11-2021.00	Marketing Managers	
15-1244.00	Network and Computer Systems Administrators	
15-1255.00	Web and Digital Interface Designers	
33-3021.06	Intelligence Analysts	
15-1241.00	Computer Network Architects	
15-2031.00	Operations Research Analysts	
15-1254.00	Web Developers	

[See all hot technologies >>](#)





Technology Skills & Tools Search for: Red Hat

New T2 search:

Categories matching "Red Hat"

Configuration management software

Examples: Red Hat Ansible Engine; Puppet 🔥; VMWare 🔥; Application management software; [show all 26 examples](#)

- 17-2011.00 [Aerospace Engineers](#)
- 17-1011.00 [Architects, Except Landscape and Naval](#)
- 11-9041.00 [Architectural and Engineering Managers](#)
- 17-2031.00 [Bioengineers and Biomedical Engineers](#) ⭐ **Bright Outlook**
- 15-1221.00 [Computer and Information Research Scientists](#) ⭐
- 11-3021.00 [Computer and Information Systems Managers](#) ⭐

[Show all 38 occupations](#)

Application server software

Examples: Red Hat WildFly 🔥; Docker 🔥; GitHub 🔥; Microsoft Windows Server 🔥; [show all 19 examples](#)

- 53-2022.00 [Airfield Operations Specialists](#) ⭐
- 11-9041.00 [Architectural and Engineering Managers](#)
- 19-1029.01 [Bioinformatics Scientists](#)
- 15-2051.01 [Business Intelligence Analysts](#) ⭐
- 15-1221.00 [Computer and Information Research Scientists](#) ⭐
- 11-3021.00 [Computer and Information Systems Managers](#) ⭐

[Show all 39 occupations](#)

Operating system software

Examples: Red Hat Enterprise Linux 🔥; Apple macOS 🔥; Bash 🔥; Linux 🔥; [show all 54 examples](#)





Hot Technology

Red Hat WildFly



Hot technologies are requirements frequently included in employer job postings. Listed below are occupations where this technology is most often mentioned:

Red Hat WildFly

Save Table ([XLS](#)/[CSV](#))

In the category "[Application server software](#)"

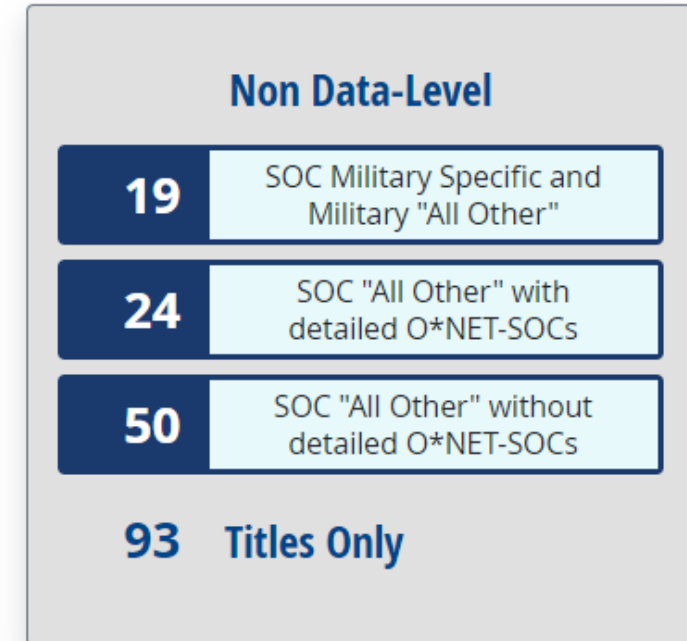
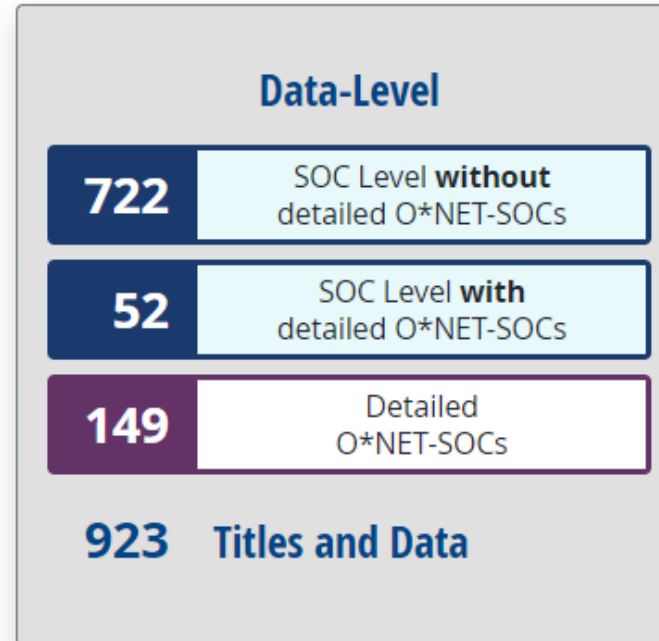
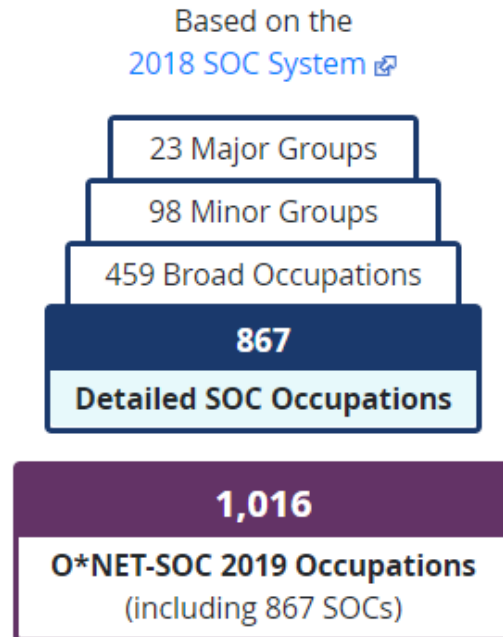
+ - All 20 displayed

- 15-1299.08 [Computer Systems Engineers/Architects](#) ⭐ **Bright Outlook**
- 15-1244.00 [Network and Computer Systems Administrators](#)
- 15-1211.00 [Computer Systems Analysts](#) ⭐
- 15-1254.00 [Web Developers](#) ⭐
- 15-1251.00 [Computer Programmers](#)
- 15-1232.00 [Computer User Support Specialists](#) ⭐
- 15-1212.00 [Information Security Analysts](#) ⭐
- 15-1299.09 [Information Technology Project Managers](#) ⭐
- 13-1111.00 [Management Analysts](#) ⭐
- 15-1242.00 [Database Administrators](#) ⭐
- 15-1253.00 [Software Quality Assurance Analysts and Testers](#) ⭐
- 17-2112.02 [Validation Engineers](#) ⭐
- 15-1299.01 [Web Administrators](#) ⭐
- 15-1241.00 [Computer Network Architects](#) ⭐
- 15-1243.00 [Database Architects](#) ⭐
- 15-2051.01 [Business Intelligence Analysts](#) ⭐
- 11-3021.00 [Computer and Information Systems Managers](#) ⭐
- 19-4013.00 [Food Science Technicians](#)
- 15-1252.00 [Software Developers](#) ⭐



About the O*NET-SOC 2019 Taxonomy

The O*NET-SOC 2019 taxonomy structure has been revised based on the transition to the 2018 SOC. The new O*NET-SOC taxonomy includes 1,016 occupational titles, 923 of which represent O*NET data-level occupations.



<https://www.onetcenter.org/taxonomy.html#latest>



O*NET Transition to 2018 Standard Occupational Classification

Transition to the O*NET-SOC 2019

The O*NET 25.1 Database release incorporated the O*NET-SOC 2019 Taxonomy structure. The release of this database occurred November 17, 2020. In addition, at that time, the O*NET websites and O*NET Web Services transitioned to the new structure. This release schedule took into account the implementation schedules for the 2018 SOC of related state and local occupations from the Bureau of Labor Statistics and the Census Bureau.

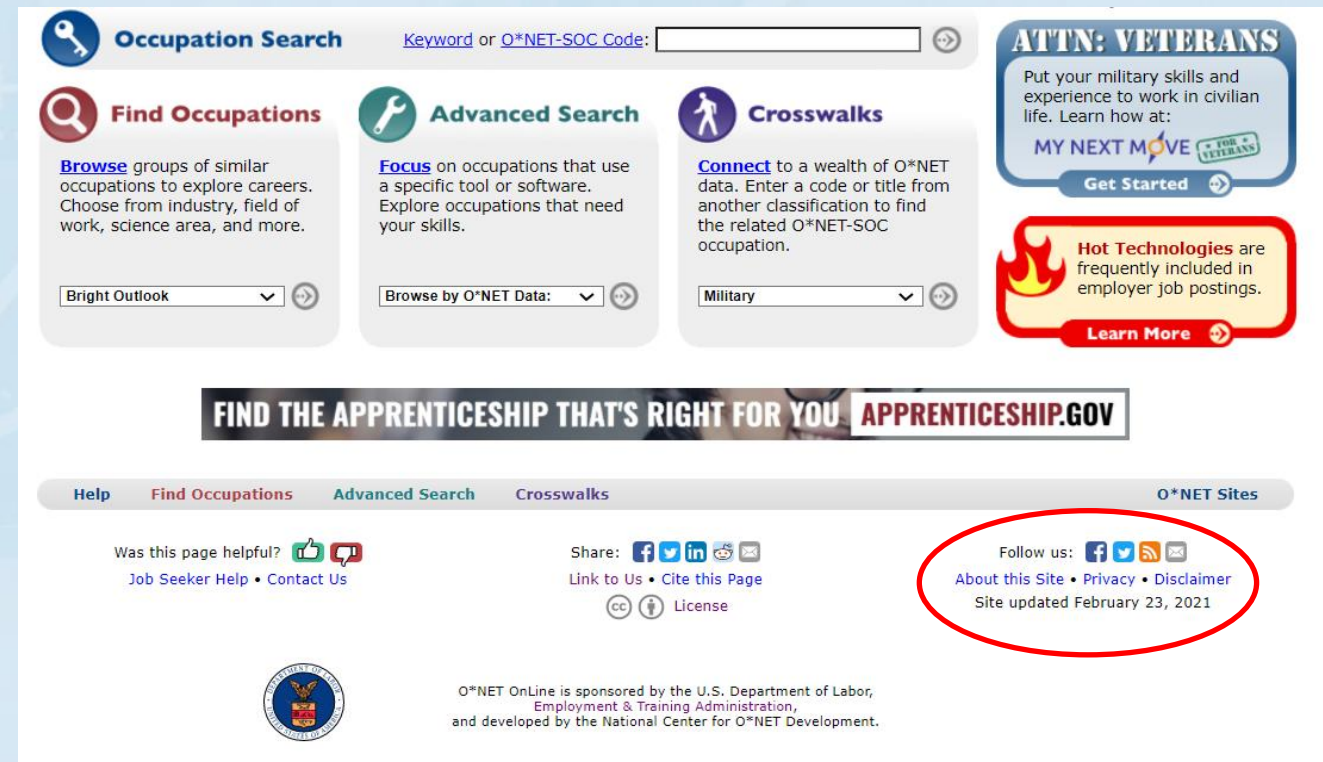
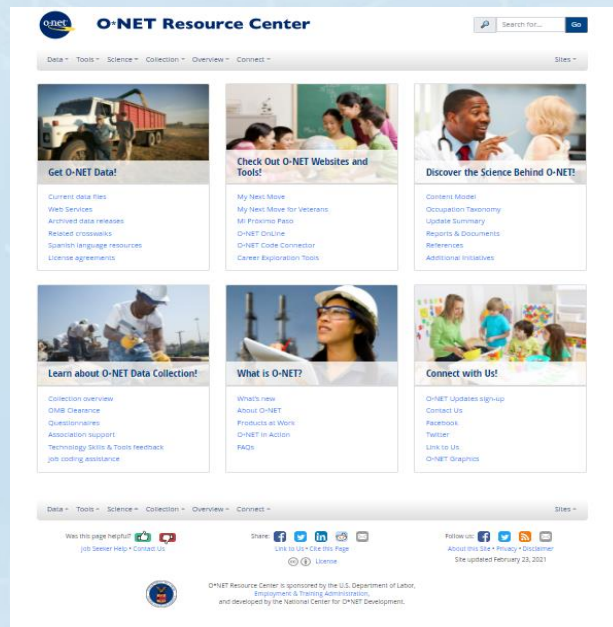
To help O*NET Web Services users with the taxonomy transition, Taxonomy Services are available to enable developers to connect occupational data between existing systems based on the legacy O*NET-SOC 2010 taxonomy, and the Current O*NET SOC 2019 taxonomy-based O*NET Web Services.

For customers whose program schedule has not yet enabled them to migrate to the O*NET-SOC 2019 Taxonomy, O*NET OnLine Archives is available. This limited snapshot version of O*NET OnLine provides access to archived occupation reports that will remain permanently based on the O*NET-SOC 2010 Taxonomy. In addition, the O*NET 25.0 database (last O*NET-SOC 2010 based version) will remain available at O*NET Database Releases Archive.

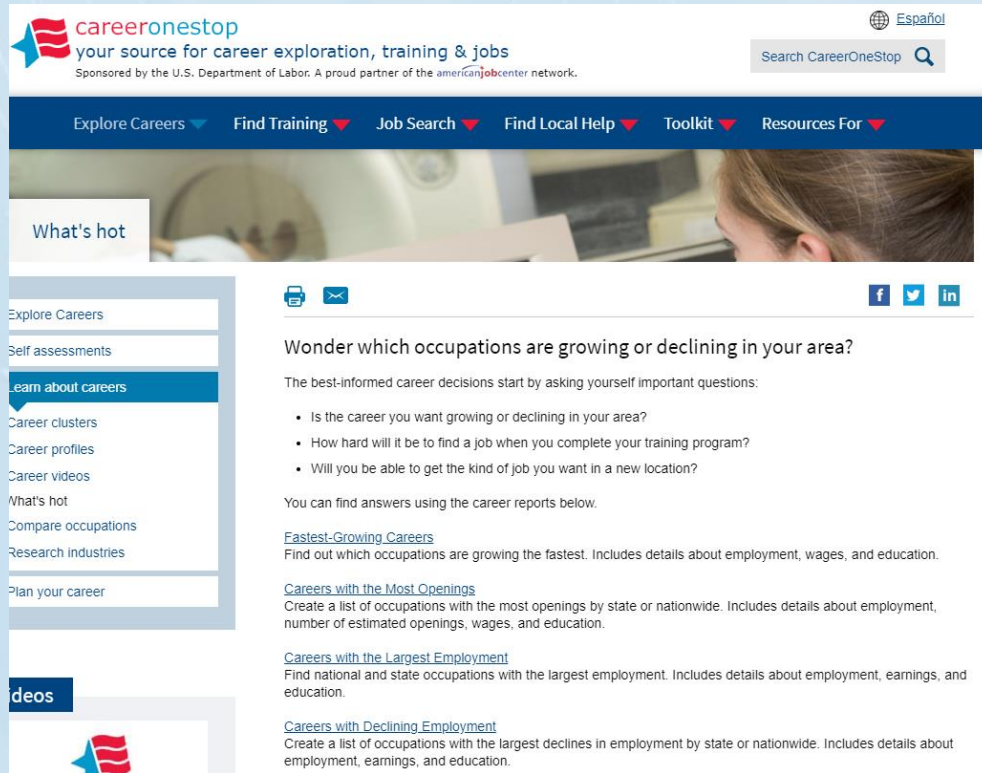


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At bottom right of any O*NET website
Look for the envelope icon following Follow-us:



CareerOneStop – What's Hot



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- Careers with the Most Openings
- Careers with the Largest Employment
- Careers with Declining Employment

<https://www.careeronestop.org/ExploreCareers/Learn/whats-hot.aspx>



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Fastest-Growing Careers

Your Search

Search by Location
United States

Search

Filter By

Typical Education

[High school diploma or equivalent \(172\)](#)
[Bachelor's degree \(143\)](#)
[Master's degree or higher \(87\)](#)
[Some high school \(66\)](#)
[Associate's degree \(37\)](#)
[Some college \(35\)](#)

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[Careers with Declining Employment](#)
[Careers with Largest Employment](#)
[Careers with Most Openings](#)

These are the occupations that were expected to have the largest rate of growth from 2016 to 2026 (for states) or 2019 to 2029 (for the United States overall). Please note that these projections do not account for the impacts of the current pandemic. Many occupations are likely to have very different projections due to the rapidly changing economy. When revised data are available, they will be published here.

We found 540 growing occupations in United States.

Rank	Occupation	Employment		Percent Change	Earnings	Typical Education
		2019	2029			
1	Wind Turbine Service Technicians	7,000	11,300	61%	\$\$\$	Postsecondary non-degree award
2	Nurse Practitioners	211,300	322,000	52%	\$\$\$\$	Master's degree
3	Solar Photovoltaic Installers	12,000	18,100	51%	\$\$\$	High school diploma or equivalent
4	Occupational Therapy Assistants	47,100	63,500	35%	\$\$\$\$	Associate's degree
5	Statisticians	42,700	57,500	35%	\$\$\$\$	Master's degree
6	Home Health and Personal Care Aides	3,439,700	4,599,200	34%	\$	High school diploma or equivalent



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Locate local schools and training programs by occupation or location to find the best fit for you.

[Certification Finder](#)

Learn about occupational certifications and how to acquire them.

[Scholarship Finder](#)

Search more than 7,000 scholarships, fellowships, loans, and other financial aid opportunities.

[License Finder](#)

License requirements vary by state. Learn whether a career of interest requires a license in any of the 50 states, and find contact information for the agency in your state that oversees licensing.

[Professional Association Finder](#)

Locate national professional associations by occupation, industry, or the association name. Tool provides a link to the association's website and indicates whether the association has a career center or offers certifications.



CareerOneStop Certification Finder

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Certification Finder

New Search

Find current certifications for your occupation or industry. Use the filters at left to refine your results.

Your Search

Keyword

robotics

Search by Certification Name, Organization, Industry or Occupation

robotics

Search

We found 9 certification(s) from 4 organization(s) for **robotics**.

Certification Name	Certifying Organization	Type
Certified Robotic Arc Welding Operators and Technicians  	American Welding Society	Specialty
ISA Certified Control Systems Technician - Level I  	International Society of Automation	Core
Certified Automation Professional 	International Society of Automation	Advanced
HVACR Brazing Processes	National Inspection, Testing and Certification Corporation	Core
Certified Welding Sales Representative 	American Welding Society	Core
Certified Welding Fabricator  	American Welding Society	Advanced
Certified Welding Inspector  	American Welding Society	Core

New Search by

Related Occupations

[Robotics Engineers](#)

[Robotics Technicians](#)

[Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders](#)

[Commercial and Industrial Designers](#)

[Engineering Teachers, Postsecondary](#)

Filter By

In Demand

[Yes \(1\)](#)

Industry

[Specialty Trade Contractors \(5\)](#)

[Professional, Scientific, and Technical Services \(4\)](#)

[Computer and Electronic Product Manufacturing \(3\)](#)

What do the icons next to the certifications mean?

 = **This certification is considered in demand.** CareerOneStop's analysis indicates the certification is frequently mentioned in online job postings.

 = **This certification is accredited by ANSI.** The American National Standards Institute (ANSI)

 = **This certification is related to Career and Technical Education Career Clusters.** Certifications marked with [C] are related to the knowledge and skills specified in one or more of the sixteen Career and Technical Education Programs of Study.

 = **This certification is industry-endorsed.** Certifications marked as third-party endorsed are endorsed by a major industry association that is not itself the developer of the certification.

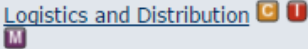
 = **This certification is related to the Job Corps training program.** Certifications marked with [J] are ones that have been selected by the industry groups that advise the Job Corps program on their training program offerings.

 = **This certification is related to Military Occupational Specialties.** These certifications were identified in Credentialing Opportunities On-Line (COOL) sites

 = **This certification is accredited by NCCA.** The National Commission for Certifying Agencies



Icons with the Certifications

Search by Certification Name, Organization, Industry or Occupation		
logistics		Search
We found 61 certification(s) from 34 organization(s) for logistics .		
Certification Name	Certifying Organization	Type
Certified Logistics Technician 	Manufacturing Skill Standards Council	Core
Certified Logistic Professional	International Warehouse Logistics Association	Core
Global Logistics Associate 	American Production and Inventory Control Society	Core
SAP Certified Application Professional - Logistics Execution & Warehouse Mgmt. with SAP ERP 6.0 EHP4	SAP America, Inc.	Advanced
Certified in Transportation and Logistics and Distribution 	American Production and Inventory Control Society	Advanced
Certified International Trade Logistics Specialist 	IIEI Certification	Specialty



Type of Certification

Certified Master Logistician  	International Society of Logistics	Advanced
Certified International Trade Professional	IIIEI Certification	Advanced
Certified Supply Chain Professional   	American Society of Transportation and Logistics	Advanced
Certified Technology Specialist-Installation  	InfoComm International	Core
Certified Correctional Trainer	American Jail Association	Advanced
SAP Certified Application Professional - EWM with SAP SCM 7.0 EHP1 and WM with SAP ERP 6.0 EHP5	SAP America, Inc.	Advanced
SAP Certified Application Professional - EWM with SAP SCM 7.0 EHP1 and WM with SAP ERP 6.0 EHP5	SAP America, Inc.	Product/Equipment
SAP Certified Application Associate - SAP Business One 9.0	SAP America, Inc.	Product/Equipment
Microsoft Dynamics AX 2012 Lean Manufacturing	Microsoft Corporation	Product/Equipment
Certified Emergency Operation Center (EOC) Manager 	Center for Security and Emergency Management	Advanced
Certified Materials & Resource Professional 	Association for Healthcare Resource & Materials Management	Core
Certified Maintenance & Reliability Professional  	Society for Maintenance & Reliability Professionals	Advanced



CareerOneStop Occupational License Finder



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Occupation, License Name or Licensing Agency

Licensed Practical and Licensed V

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Other Occupations

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[Advanced Practice Psychiatric Nurses](#)

[Nurse Practitioners](#)

[Nurse Midwives](#)

[Rehabilitation Counselors](#)

[Nursing Assistants](#)

About this data

Occupational license information is from the [Analyst Resource Center \(ARC\)](#).

[Help](#)

We found 79 licenses for Licensed Practical and Licensed Vocational Nurses in United States.

License Name	Licensing Agency	State
NURSE, LICENSED PRACTICAL	Illinois Department of Financial and Professional Regulation	Illinois
Nurse, Licensed Practical	Alaska Department of Commerce, Community & Economic Development Division of Corporations, Business, and Professional Licensing Alaska Board of Nursing	Alaska
LICENSED PRACTICAL NURSE	WYOMING STATE BOARD OF NURSING Attn: Cynthia LaBonde, MN, RN, Executive Director	Wyoming
Nurses, Registered and Licensed Practical, Re-entry	Oregon State Board of Nursing	Oregon
Licensed Practical Nurse	SC Board of Nursing	South Carolina
Nurse Licensure - Licensed Practical	Department of Public Health	Connecticut
Licensed Practical Nurse (LPN)	Ohio Board of Nursing	Ohio
Licensed Practical Nurse	Department of Public Health	Connecticut
Nurse, Licensed Practical	South Dakota Board of Nursing	South Dakota

NURSE, LICENSED PRACTICAL

License Description

An individual who assists in the care of the ill, injured, and disabled persons. Under the supervision of registered nurses, physicians, dentists or podiatrists, the licensed practical nurse administers certain medications, monitors equipment, cleans dressings, take temperatures and blood pressures, and assists patients with personal hygiene.

Licensing Agency

Illinois Department of Financial and Professional Regulation
320 West Washington
Springfield, IL 62786
(217) 782 8556
<https://www.idfpr.com/>

Active Status

Active

Continuing Education

Continuing education required

Criminal Record

No criminal record requirements

Education

Degree required

Exam

Third-party exam required

Experience

No experience

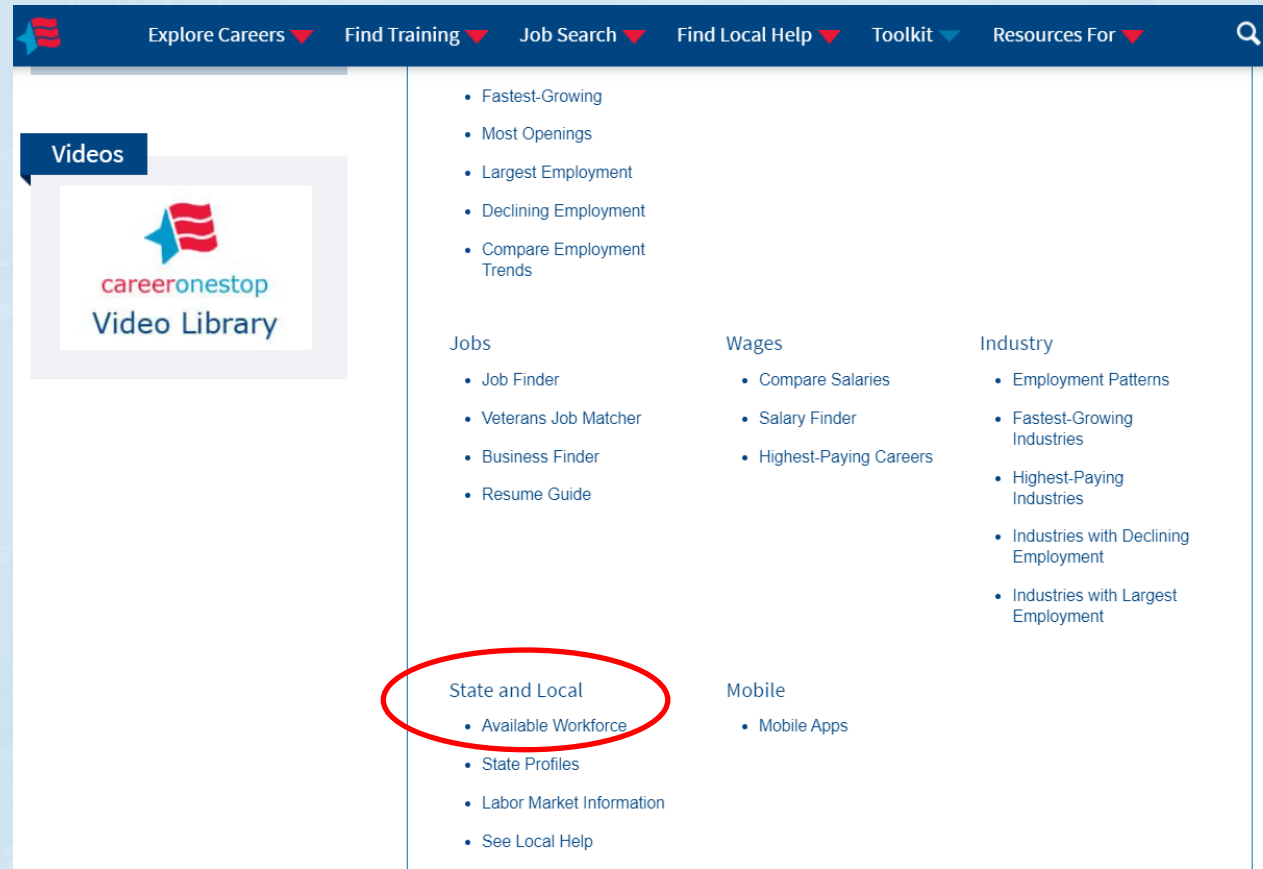
License Type

Stand-alone license

License Updated

10/22/2014

COS Available Workforce Toolkit



<https://www.careeronestop.org/Toolkit/StateAndLocal/available-workforce.aspx>





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Available Workforce

aboutthisdata:

The **Available Workforce** tool lets you build profiles of your state and local workforce. You can create and view customized reports including:

- Current and projected employment
- Average wages
- Unemployment rates
- Top industries
- Local education and training programs
- Local demographic information

[Help](#)

To get started, enter an occupation and a city, state, or ZIP code below.

Search by Occupation

Welders, Cutters, Solderers

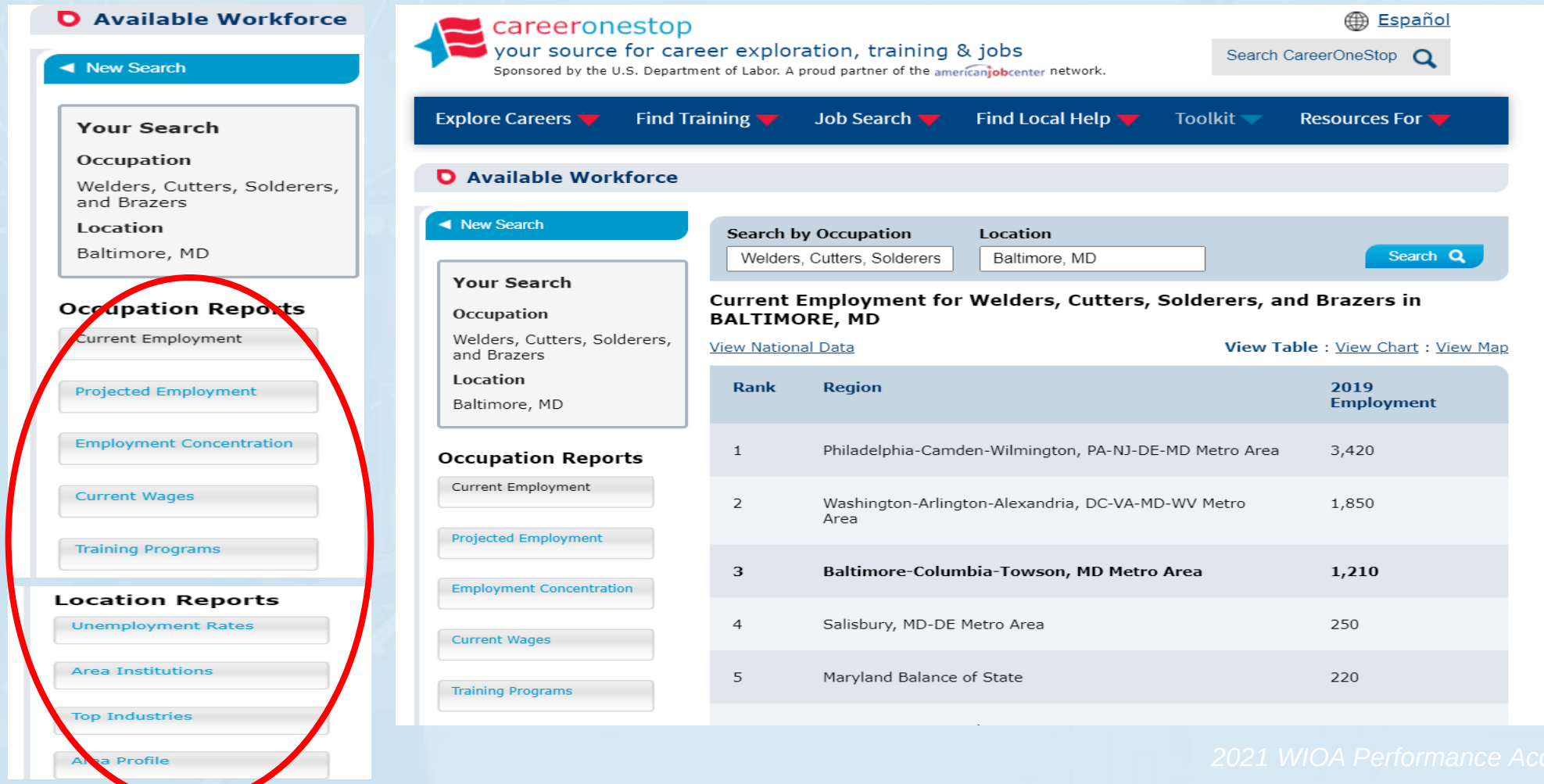
Location

Baltimore, MD

Search 



See various options by clicking through the left panel



Available Workforce

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Your Search

Occupation
Welders, Cutters, Solderers, and Brazers

Location
Baltimore, MD

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Search by Occupation
Welders, Cutters, Solderers

Location
Baltimore, MD

[Search](#)

Current Employment for Welders, Cutters, Solderers, and Brazers in BALTIMORE, MD

[View National Data](#) [View Table](#) : [View Chart](#) : [View Map](#)

Rank	Region	2019 Employment
1	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD Metro Area	3,420
2	Washington-Arlington-Alexandria, DC-VA-MD-WV Metro Area	1,850
3	Baltimore-Columbia-Towson, MD Metro Area	1,210
4	Salisbury, MD-DE Metro Area	250
5	Maryland Balance of State	220

Closer view

Search by Occupation

Welders, Cutters, Solderers

Location

Baltimore, MD

Search

Employment Concentration of Welders, Cutters, Solderers, and Brazers in Baltimore, MD

[View National Data](#)

[View Table](#) : [View Chart](#) : [View Map](#)

Rank	Region	2019 Employment Concentration level	Location Quotient
1	Maryland Balance of State	Average opportunities	1.29
2	Hagerstown-Martinsburg, MD-WV Metro Area	Below average opportunities	0.66
3	Cumberland, MD-WV Metro Area	Below average opportunities	0.57



Area Profile

Area Profile for Baltimore, Md

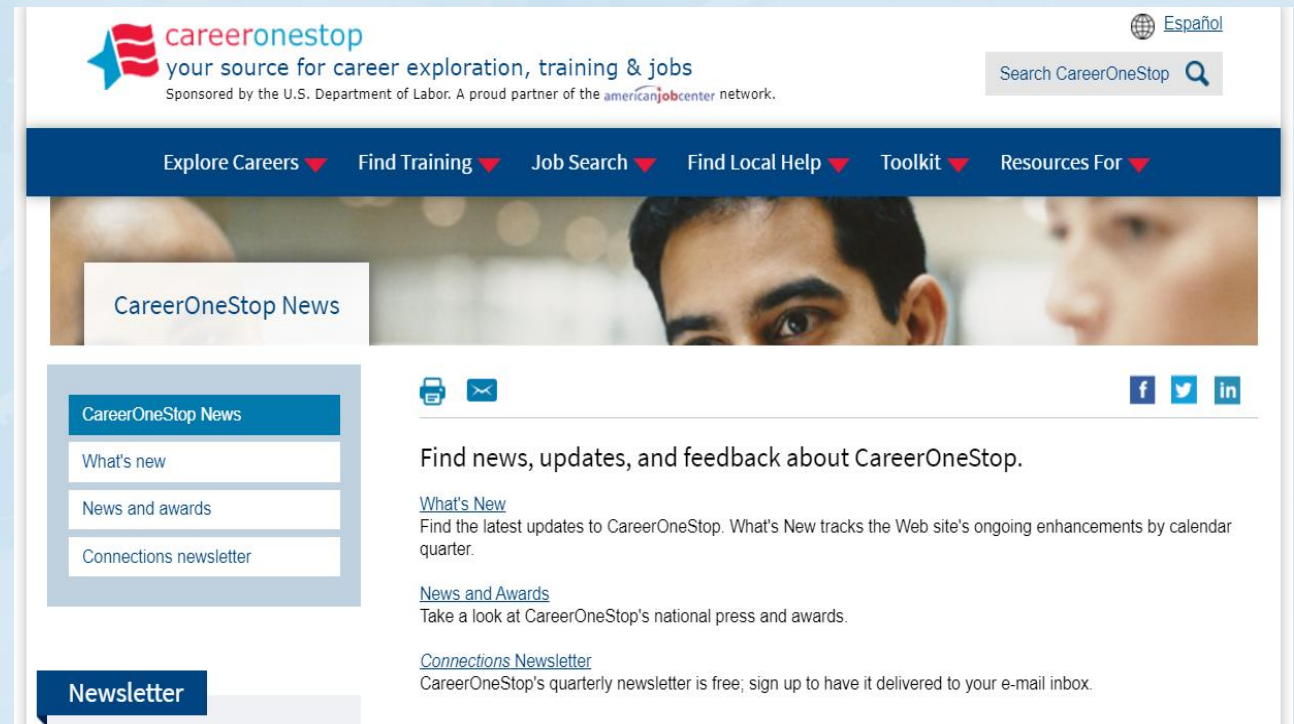
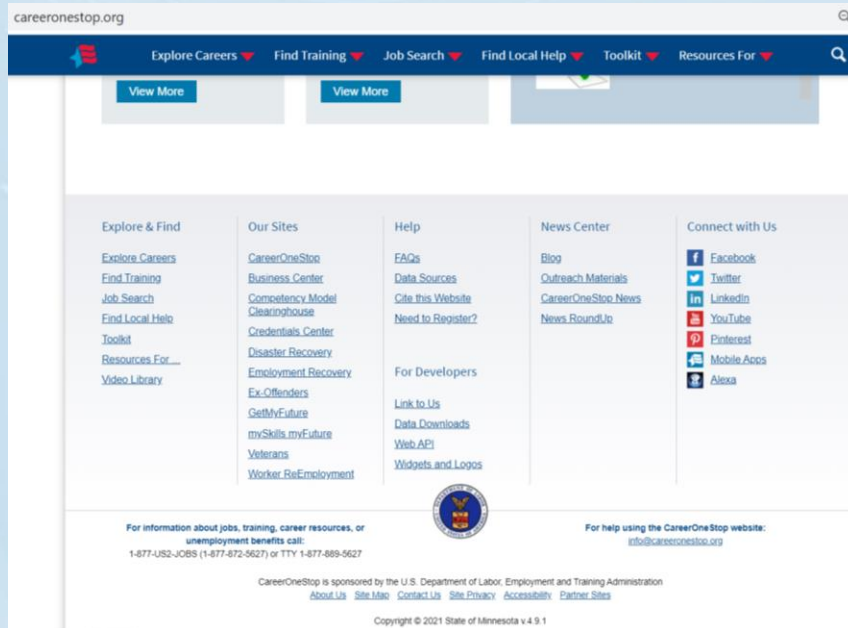
Local Area Information	Baltimore city	Baltimore-Columbia-Towson, MD Metropolitan Statistical Area
Population	622,271	2,753,396
Civilian labor force	312,605	1,481,223
Number employed	269,078	1,360,481
Unemployment rate	8.6%	5.5%
Median household income	\$41,819	\$70,311
Per capita income	\$25,062	\$35,613
Poverty rate	24.2%	11%
High school graduates	80.9%	89.2%
Bachelor's degree or higher	27.7%	36.6%
Median gross rent	\$944	\$1,141
Rent as a percentage of household income	32.9%	30.9%
Median housing value	\$155,000	\$277,600

Location Reports

[Unemployment Rates](#)[Area Institutions](#)[Top Industries](#)[Area Profile](#)

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