



Your Local Employment Planning Council

Occupation Report

Software engineers and designers NOC 2173

Ottawa, Ontario, & Canada (2016-2021)
3-year historical data & forecasted growth

Updated June 2019

Software engineers and designers

Ottawa Outlook

NOC 2173

Limited ★ Fair ★★ Good ★★★

Based on past and forecasted growth.

A Local Snapshot

- Employment in this occupation **declined in Ottawa from 2016 to 2018 (14.8%)**; it is forecast to **decrease an additional 4.6%** over the next three years.
- **2.9%** were **unemployed in Ottawa in 2016**; **414 (6.2%)** of those in this occupation were **self-employed**.
- **Median hourly wage** for this occupation was **\$49.20**.
- **34.6%** of the 2018 jobs were in the **Computer systems design and related services** industry sector.
- Ottawa has a **significantly higher share of this occupation** than the nation.
- **Provincially**, this occupation showed an increase from 2016 to 2018 (**7.2%**); it is expected to continue to over the next three years (**7.6%**).
- In contrast to Ottawa Employment Hub's forecast ranking for this occupation, *Canada Job Bank* forecasted **good** employment potential for this occupation in Ottawa from 2018-2020.

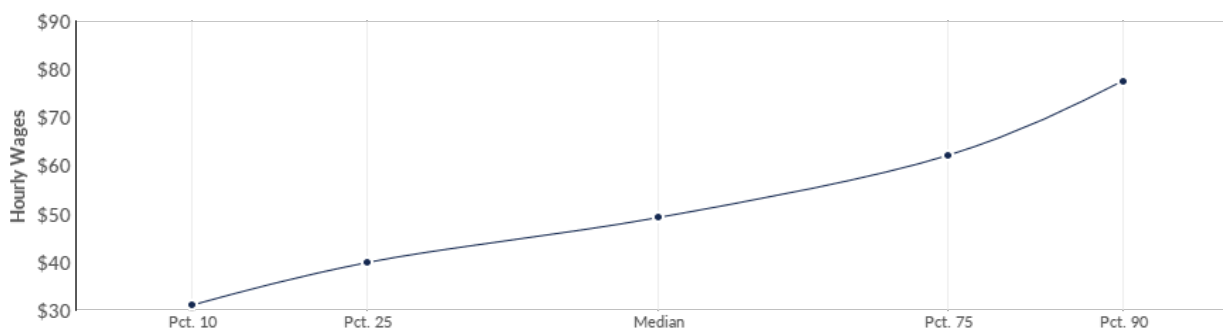
Overview

Ottawa Jobs (2018)	6,725 (6% self-employed = 414)		
2016 Ottawa Unemployment Rate	2.9%	Ontario	3.1%
Location Quotient to Nation (2018)	3.80		
Change in Jobs (2016 - 2018)	-14.8%	(2018 - 2021)	-4.6%

NOTE: Location quotient (LQ) is a way of quantifying how concentrated a particular occupation is in a region compared to the nation or province. A quotient of 1.00 means Ottawa has the same share of the occupation as the nation/province. A quotient higher than 1.00 means Ottawa has a greater share, and lower than 1.00 means Ottawa's share is lower than the average.

OTTAWA | Percentile Earnings (not including self-employed)

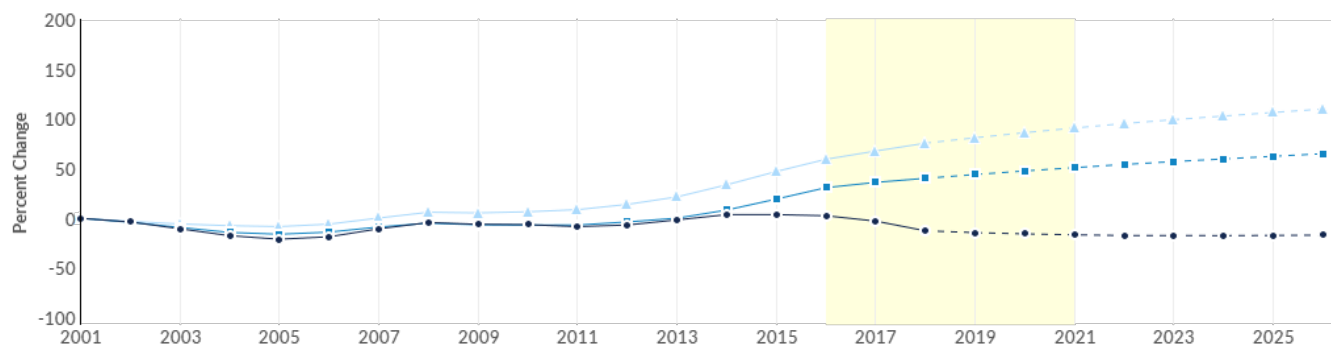
\$39.88/hr	\$49.20/hr	\$62.15/hr
25th Percentile Wages	Median Wages	75th Percentile Wages



Ottawa | Growth

7,891 2016 Jobs	6,413 2021 Jobs	-1,478 Change (2016-2021)	-18.7% % Change (2016-2021)
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Regional Trends



	Region	2016 Jobs	2021 Jobs	Change	% Change
●	Ottawa	7,891	6,413	-1,478	-18.7%
●	Ontario	28,152	32,479	4,327	15.4%
●	Canada	50,100	59,980	9,880	19.7%

	Ottawa	Ontario	Canada
2016 Jobs	7,891	28,152	50,100
2017 Jobs	7,475	29,293	52,694
2018 Jobs	6,725	30,173	55,185
2019 Jobs	6,584	30,987	56,899
2020 Jobs	6,487	31,765	58,510
2021 Jobs	6,413	32,479	59,980

Ottawa | Industries Employing this Occupation

Industry	Occupation Jobs in Industry (2018)	% of Occupation in Industry (2018)	% of Total Jobs in Industry (2018)
Computer systems design and related services	2,325	34.6%	10.4%
Scientific research and development services	673	10.0%	10.8%
Computer and communications equipment and supplies merchant wholesalers	607	9.0%	8.8%
Software publishers	535	8.0%	17.8%
Other federal services (9112-9119)	451	6.7%	0.5%

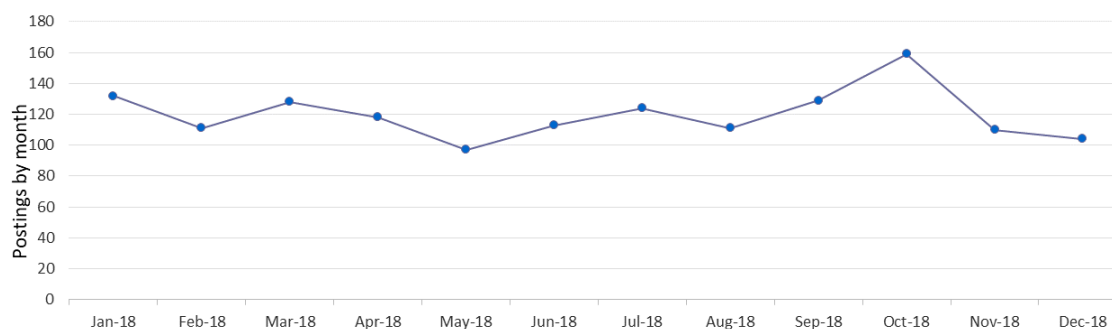
NOTE: Inverse staffing patterns provides a table of percentages that shows how regional occupations are divided up among regional industries. For example, an inverse staffing pattern for registered nurses may show that 70% of RNs are employed by hospitals, 10% by local government (i.e., public schools), 10% by nursing homes, and 10% by offices of physicians.

Educational programs and completions in Ottawa (public institutions only)

7 Programs (2016)		621 Completions (2016)
CIP Code	Program	Completions (2016)
11.07	Computer science	233
15.12	Computer engineering technologies/technicians	192
14.09	Computer engineering	114
11.08	Computer software and media applications	77
11.01	Computer and information sciences and support services, general	5

NOTE: EMSI Analyst uses Statistics Canada's PSIS data to compile completions for postsecondary programs offered in Canada, classified by the 2016 CIP codes. 2016 data includes those who graduated in spring 2017.

Job Postings by Month



Total annual job postings: 1,436

NOTE: Based on newly published job postings first found between January 01, 2018 and December 31, 2018 AND location is Ottawa Census Sub-division, Vicinity Jobs.

Other Considerations

LICENSURE/OTHER REQUIREMENTS FOR ONTARIO:

- A **regulated** profession; certification required through Professional Engineers Ontario
- Engineers are eligible for registration following graduation from an accredited educational program, three or four years of supervised work experience in engineering, and passing a professional practice examination

NOTE: Workers in regulated occupations require a licence to work legally. Workers in non-regulated occupations do not require a licence, but employers may have other certification requirements.

CANADIAN LANGUAGE BENCHMARKS: **N/A**

Links to Additional Occupational Information

[Ontario Job Futures](#) – NOC 2173 Software engineers and designers

[GOC Job Bank](#) – Cites outlook information for Ottawa, as well as Ontario and Canada; also shows job postings and wage information for Ottawa.

[Statistics Canada - Occupation information for NOC 2173](#)

Ontario Skills Passport - Skills profile for Software engineers and designers – *not available for this occupation*

About EMSI Occupational data

Economic Modeling Specialists Inc. (EMSI) amalgamates information from several data sources in order to produce its occupation counts:

- Canadian Business Patterns (CBP) – *Updated December 2018*
- Census – *2016*
- Survey of Employment, Payrolls and Hours (SEPH) – *Updated December 2018*
- Labour Force Survey (LFS) – *2018*
- Canadian Occupational Projection System (COPS) – *Latest projections cover 2016-2026*
- Demographic CANSIM tables – *Various updates*
- Postsecondary Student Information System (PSIS) - *Updated annually; 2016/17 data available now*

Information from these sources is combined into a dataset that is updated twice annually by EMSI; the latest release came in the Spring of 2019 and these reports reflect actuals and projections based on that data. Detailed occupation data is based primarily on industry staffing patterns collected by the SEPH, which surveys businesses and is considered more reliable than the LFS, which surveys individuals.

NOTE: In 2016, EMSI Analyst switched from the NOC-S 2006 occupation classification system to the NOC 2011 occupation classification system. Some occupation titles and groupings have been modified slightly as a result; all historical data has been adjusted to match the NOC 2011 classification system.

*Should you have any further questions about the data in this report, please contact **Ottawa Employment Hub** at 613-727-4723 X6873 or info@OttawaEmploymentHub.com*