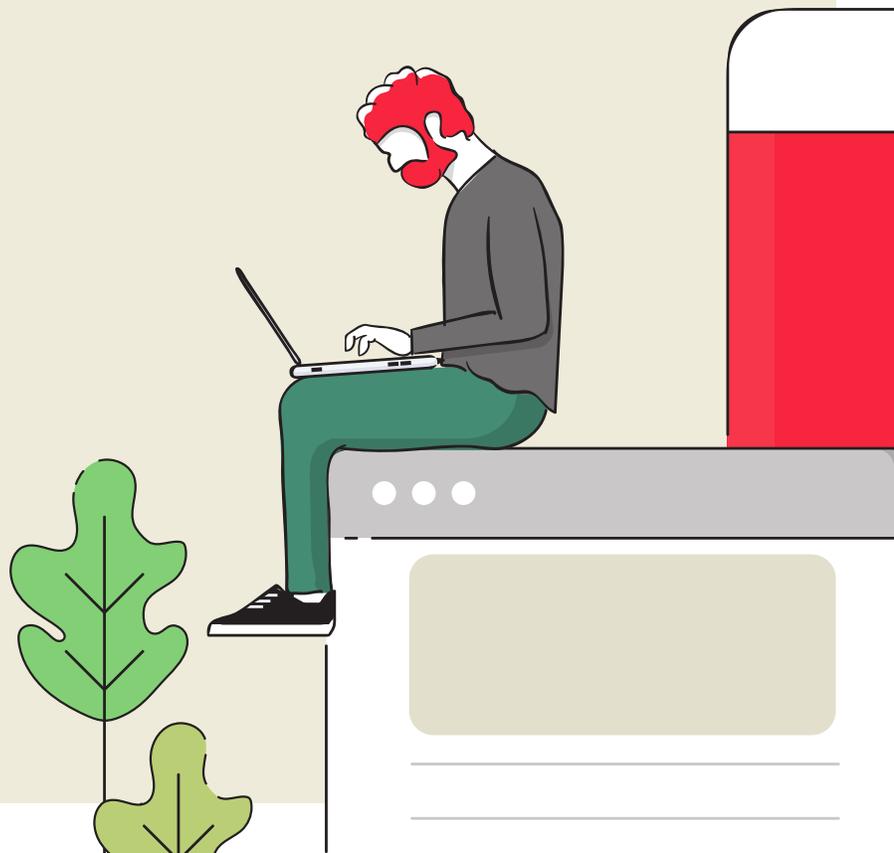


What Does Education Pay?

Canadian Developer Survey 2019



Is Canada's job market becoming more friendly to workers without a university degree? For developers, at least, traditional symbols of achievement appear to be losing ground to hard skills and vocational training across a wide range of Canadian industries.

In its first annual education survey of Canadian developers, Course Compare found that 86 per cent of full-time workers don't believe a university degree is needed to succeed in 2019—and our respondents have the salaries and education to prove it. Self-taught developers who did not pursue formal education beyond high school will earn \$60,124, on average, this year. That's \$10,000 more than the national average for all workers. (The average Canadian developer earns \$77,913.)

More surprising, though, is that 9 per cent—nearly 1/10th of Canadian developers—reported studying at a coding bootcamp. It isn't only fierce competition for talent that's shaking up corporate hiring practices. Our findings clearly show that new forms of training and education are helping prepare workers for a tech-filled future. Here's how that future is taking shape for software developers across the country.

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Methodology

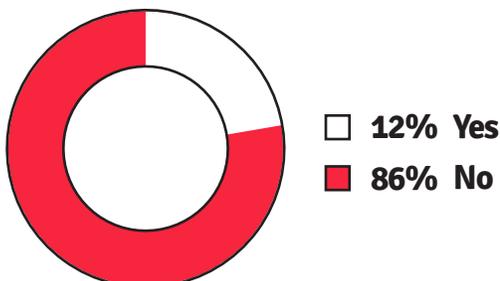
This report is based on 500 responses from Canadian software developers surveyed online between August 15 - September 30, 2018.

- The average time respondents took to complete this survey was 4.4 minutes. The median time for those who finished the entire survey was 5.1 minutes.
- Responses were accepted from professionals working as “software developers,” “web developers,” “computer programmers,” and close variations of these job titles.
- Respondents were recruited through paid online channels, including banner ads, Facebook ads and LinkedIn ads targeting software developers across Canada. CourseCompare.ca social media channels were also used to recruit respondents.
- Data from Ph.D. and professional certificate and degree holders (e.g., J.D., L.L.B., M.D., CFA, CPA, etc.) were insufficient for our analysis of salary expectations by degree type, and were excluded from report.

Do Developers Need a Degree?

Most Canadian developers believe a university degree is valuable, but they don't believe earning one is essential for success. Here's what a cross-section of junior coders, seasoned developers and the managers and CTOs who hire them had to say. →

Do Canadian developers need a university degree?



“ Most employers want to see your portfolio, and will ask you to demonstrate your skills with some sort of coding test. In my experience as a hiring manager, this is more important than the education you have.”

“ I think there are skills you can't get without finishing university. Computer science courses teach you solid algorithm design, data structures and statistics, not to mention critical thinking. That's a lot to cram into a coding bootcamp.”

“ Training for this profession is becoming 'democratized,' which means more people have access to lectures, seminars, competitions, demo days and other learning networks than ever before. The biggest advantage of a self-taught software engineer is the ability to save on time (strictly compared to a 4-year undergraduate program) and money.”

“ I'm the CTO of a tech startup in Toronto. I've interviewed a bunch of computer science majors and they simply aren't as job-ready as polytechnic grads.”

“ Developers don't need a degree to be successful, but it might help them get a job in the first place. I don't think I would've been hired for my first job without my degree in computer engineering.”

“ A coding bootcamp is more than enough to pick up the skills necessary to work and succeed as a software developer. I went to a coding bootcamp after finishing a general arts degree. My bootcamp experience gave me the focus and applied skills I needed to land a great job at a U.S.-based tech company.”

“ I've hired dozens of developers and noticed that each degree has its advantages and disadvantages. University grads tend to be better at theoretical topics like software design. College graduates or self-taught programmers tend to be more hands-on and practical, with a strong understanding of the latest tools and technologies. Both are valuable. But the single most important thing a candidate needs is a willingness to learn, and to never stop learning.”

Degrees & Salaries

What does a degree pay these days? The following are average annual salaries for Canadian developers based on highest level of education.

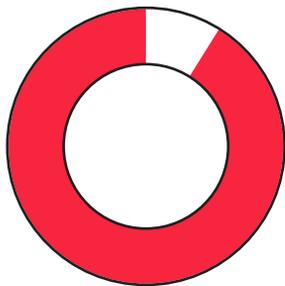
| | |
|---------------------------------------|-----------------|
| High school diploma | \$60,124 |
| College diploma | \$67,221 |
| Bachelor's degree | \$82,825 |
| Master's degree | \$94,545 |
| Average number of years worked | 5.8 |
| Median number of years worked | 4.0 |

Data has been excluded from respondents who hold a doctorate or professional degree.

Coding Bootcamps

Nine percent of Canadian developers have taken a full- or part-time course at a coding bootcamp.

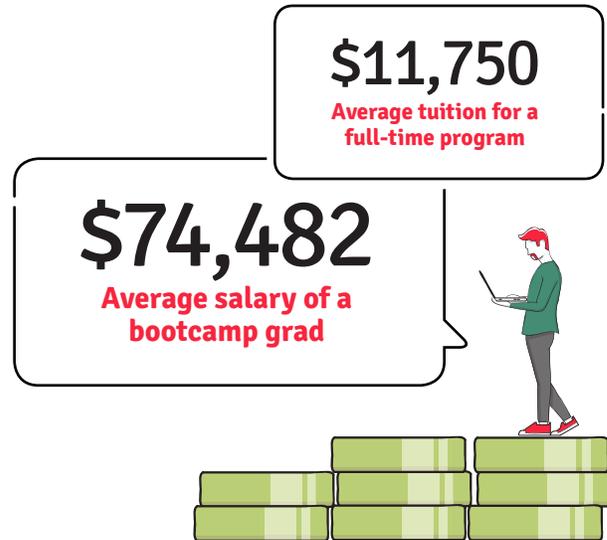
Have you completed full- or part-time studies at a coding bootcamp?



- 9% Yes**
Bootcamp grads
- 91% No**
All other forms of education

Salaries

The average annual salary of a coding bootcamp graduate is \$74,482. The average experience for coding bootcamp graduates in this survey was just four years, compared to six years for developers with no bootcamp experience. Given that Canadian coding bootcamps began opening their doors in 2012, this isn't surprising. We've only begun tracking long-term career performance for this fast-growing cohort.

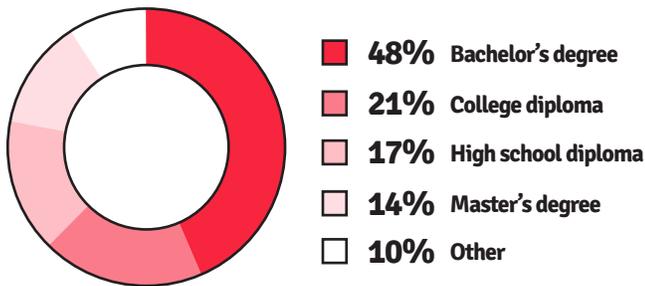


BOOTCAMP GRADUATES

| | |
|---------------------------------------|------------|
| \$40,000-\$49,999 | 7% |
| \$50,000-\$59,999 | 21% |
| \$60,000-\$69,999 | 24% |
| \$70,000-\$79,999 | 10% |
| \$80,000-\$89,999 | 7% |
| \$90,000-\$99,999 | 5% |
| \$100,000-\$109,999 | 4% |
| \$110,000-\$119,000 | 1% |
| \$120,000-\$129,999 | 3% |
| \$130,000-\$139,999 | 2% |
| \$140,000-\$149,000 | 1% |
| \$150,000-\$159,999 | 4% |
| \$160,000+ | 1% |
| Did not answer | 10% |
| Average number of years worked | 4.0 |
| Median number of years worked | 2.9 |

Education

Who's filling seats at Canadian coding bootcamps?
 Nearly half of all graduates had a bachelor's degree before enrolling in a bootcamp.



Graduates report having earned degrees in a wide variety of subjects before enrolling in a coding bootcamp. Surprisingly, computer science and computer programming graduates of both colleges and universities are represented here. Each of the following degree types were reported by at least five per cent of bootcamp graduates.

- Bachelor of Arts
- Bachelor of Business Administration
- Bachelor of Computer Science
- Bachelor of Engineering
- Bachelor of Fine Arts
- Bachelor of Science
- Diploma in Computer Programming
- Diploma in Computing & Information Systems, Information Technology, or System Administration
- Diploma in Graphic Design

Developer Roles

Bootcamp graduates are more likely than developers with other educational backgrounds to secure roles as front-end developers (55 per cent versus 31 per cent) →

What type of developer are you?

BOOTCAMP GRADUATES

| | |
|---------------------------------------|------------|
| Front-end | 55% |
| Full-stack | 24% |
| Back-end | 11% |
| Mobile app developer | 1% |
| Other | 9% |
| Average number of years worked | 4.0 |
| Median number of years worked | 2.9 |

NON-BOOTCAMP GRADUATES

| | |
|---------------------------------------|------------|
| Front-end | 34% |
| Full-stack | 31% |
| Back-end | 15% |
| Mobile app developer | 5% |
| Other | 15% |
| Average number of years worked | 5.8 |
| Median number of years worked | 4.0 |

Industries

BOOTCAMP GRADUATES

| | |
|-----------------------|--------|
| Retail | 10.34% |
| Media | 6.90% |
| Government | 3.45% |
| Education | 3.45% |
| Professional Services | 3.45% |
| Technology | 51.72% |
| Other | 20.69% |

NON-BOOTCAMP GRADUATES

| | |
|-----------------------|--------|
| Healthcare | 2.04% |
| Retail | 4.08% |
| Media | 7.14% |
| Financial Services | 5.10% |
| Government | 5.10% |
| Education | 3.06% |
| Professional Services | 9.18% |
| Manufacturing | 1.02% |
| Real Estate | 4.08% |
| Technology | 43.88% |
| Other | 15.31% |

About Course Compare

Course Compare is Canada's marketplace for education. We help prepare people for the future of work by connecting them to top-rated courses and training programs in business, technology and design across the country.

To learn how you can pursue Canada's most in-demand job skills, visit [CourseCompare.ca](https://www.coursecompare.ca)