COURSE REPORT

Coding Bootcamps in 2020

YOUR COMPLETE GUIDE TO THE WORLD OF BOOTCAMPS

With over 500 bootcamps around the world in 2020, choosing the right coding bootcamp is a big decision.

Use Course Report's comprehensive bootcamp guide to narrow down your options and read our answers to the most frequently asked questions about bootcamps. Our team shares our latest research about the bootcamp market size, alumni outcomes, income share agreements, university bootcamps, lending partners, and more. Plus, our predictions for where the bootcamp industry is going next!

High Level: Coding Bootcamps 101

- Coding bootcamps are intensive, accelerated learning programs that teach beginners digital skills like Full-Stack Web Development, Data Science, Digital Marketing, UX/UI Design, Cybersecurity, and Technical Sales.
- The average bootcamp costs ~\$13,500, and graduates report an average starting salary of \$67,000. Bootcamps can vary in length from 6 to 28 weeks, although the average bootcamp is ~14 weeks long.
- 3. Coding bootcamps teach modern, widely used programming languages and frameworks like Ruby on Rails, Python on Django, JavaScript, and PHP stacks through project-based learning. Students graduate from bootcamps with a portfolio, an online presence, interview skills and more. Most bootcamps help graduates find an internship or match students with an employer network in fact, in Course Report's most recent research, 83% of bootcamp alumni report being employed in programming jobs.
- There are bootcamp campuses in over 85 cities throughout the US/Canada. Coding bootcamps are predicted to graduate 23,000 students and gross \$309MM in tuition revenue in 2019.
- The average bootcamper has 6 years of work experience, has at least a Bachelor's degree, and has never worked as a programmer. However, the number of students with degrees appears to be declining slightly over time.

- 6. A lot has changed since bootcamps launched in 2012: University Bootcamps are now competing with household bootcamp names, payment options like Income Share Agreements and Deferred Tuition have exploded in recent years, and many bootcamps are dipping into the corporate training market.
- At the end of this guide, we predict several trends in 2020, including the expansion of university bootcamp partnerships, veteran programs like VET TEC, ISA legislation, and more.

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COURSE

The State of the Bootcamp Industry: Growth, Outcomes & Demographics

2020

1|Outcomes

Pre-Salary

Post-Salary

% Employed

2|Gender

Non-Binary

Female

Male

3|Race

White

Hispanic

Black/A.A.

Native Am./P.I.

4 Education

Asian

Other

No college

Associate's

Bachelor's

Master's

Professional

Doctorate

5|Military

Yes

No



72% 71%

10% 12% 12%

2% 7%

15% 14%

1% 1% 2%

10% 8% 7%

16% 21% 27%

5% 7% 6%

61% 59%

17% 12% 12%

1%

0.3% 1%

4.3% 6.6%

<u>2017 2018 2019</u>

70%

9%

12%

55%

1%

54%

95.7% 93.4% 94.6% \$66,594

\$66,367

\$59,612

\$64,389

\$74,631

\$59,870

\$59.972

\$56,205

\$69,159

\$71,537

\$66,984

\$78,778

\$70.042

n/a

89%

83%

77%

86%

n/a

79%

80%

81%

89%

88%

93%

90%

85.4%

87.1%

WHO PERFORMS BEST IN BOOTCAMPS?

Overall

\$43,348

\$66,964

83%

<u>Overall</u>

33.9%

64.4%

1.7%

72%

16%

13%

5%

1%

9%

<u>Overall</u>

20%

6%

59%

14%

1%

1%

<u>Overall</u>

5.5%

94.5%

US Census

ARE GRADUATES SUCCESSFUL?

AVERAGE SALARY	% EMPLOYED
\$67,000	82%
SALARY LIFT	AVG SATISFACTION
\$24,000	8.8/10
54%	

In 2019, 45% say they chose a bootcamp because of alumni outcomes!

POPULAR LENDERS

Lender

Other

Skills Fund

Climb Credit

Earnest/Affirm

% Used

49%

19%

2%

30%

WHAT MOTIVATES STUDENTS?

OUTCOMES

Online Bootcamps	Corporate Training	CURRICULUM INSTRUCTORS TUITION LOCATION SCHOLARSHIPFA CIUITIES
<u>2017 2018</u>	<u>2019</u>	
\$42,624 \$42,483	\$45,334	ISA/DEFERRED TUITION
\$66,726 \$60,763	\$66,729	Tuition Type <u>% Used</u>
88% 79%	74%	ISA 6%
<u>2017 2018 2019</u>	Salary <u>% Employed</u>	Deferred Tuition 15%
32.0% 34.8% 35.4%	\$67,171 87%	Did not use either 22%
66.2% 63.5% 62.5%	\$67,192 88%	Not offered 57%
1.8% 1.7% 2.0%	n/a n/a	LENGTH OF BOOTCAMPS
<u>2017 2018 2019</u>	<u>Salary % Employed</u>	Course Duration % E

Course Duration	<u>% Employed</u>	<u>Avg Salary</u>
8 weeks	83%	\$58,248
12 weeks	85%	\$69,391
16 weeks	78%	\$66,336
16+ weeks	89%	\$71,103
Destermine	and the second second	

Bootcamps are trending longer. From 10.8 weeks in 2015 to 15.1 weeks in 2019 🔺



cities and 38 states.

READ MORE: https://www.coursereport.com/reports

COURSE REPORT IS a research platform for students choosing a coding bootcamp

0.3% 1%

<u>2017 2018 2019</u>

What is a Coding Bootcamp?

Coding bootcamps are **intensive**, **accelerated learning programs** that teach beginners digital skills like **Full-Stack Web Development**, **Data Science**, **Digital Marketing**, and **UX/UI Design**. Through project-based learning, coding bootcamps get students job-ready for a career in tech in about 12 weeks. There are more than 100 coding bootcamps in cities across the US and Canada, and ~50 bootcamps internationally. The average bootcamp costs ~\$13,500, and graduates report an average starting salary of \$67,000. Since the first bootcamps opened their doors in February 2012, this industry has grown throughout the US and around the world. Bootcamps can vary in length from 6 to 28 weeks, although the **average bootcamp is ~14 weeks long**.

Coding bootcamps teach modern, widely used programming languages and frameworks like **Ruby on Rails, Python on Django, JavaScript, and PHP** stacks. They are also heavily project-based, and require students to immediately put their learnings into practice. Students build fully functional web-apps, do data analysis and use real dev tools just weeks into their programs. In recent years, the bootcamp model has extended to other digital skills like UX/UI Design, Data Science, and Cybersecurity.

Bootcampers graduate from bootcamps with a portfolio, an online presence, interview skills and more. Most bootcamps help graduates find an internship or match students with an employer network – in fact, in Course Report's most recent research, **83% of bootcamp alumni report being employed in programming jobs.**

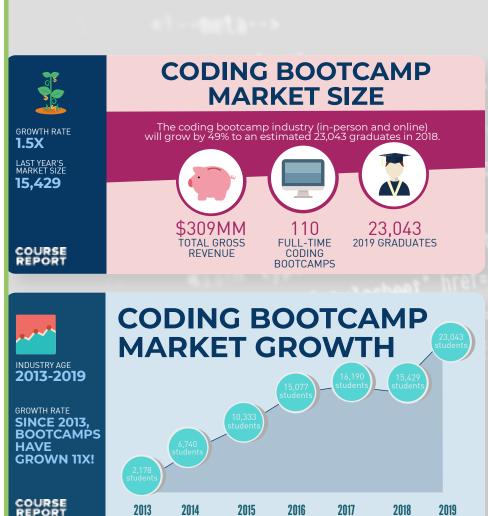
83% of bootcamp alumni report being employed in programming jobs.

The State of Coding Bootcamps in 2020

This year marks the 8th anniversary for the coding bootcamp industry, and more students than ever are learning to code at a bootcamp. Coding bootcamps are a \$309 million industry and will graduate ~23,000 developers in 2019. But a lot has changed since coding bootcamps opened their doors.

Course Report launched in 2013 with 30 total bootcamp-style programs in our directory. Today, Course Report lists over 500! About 100 of those are full-time, in-person, immersive coding bootcamps in the US and Canada. There are bootcamp campuses in over **85 cities** throughout the US/ Canada. Coding bootcamps are predicted to graduate **23,000 students and gross \$309MM** in tuition revenue in 2019. In addition to this growth of the core industry, we see growth in several other areas:

- 171% Growth of Online Bootcamps there were ~5,500 graduates of these full-time, remote bootcamps in 2019.
- There are now over 60 University Bootcamps in the US
- **Flexible Payment Options:** the rise of ISAs, Deferred Tuition, and the use of Lending Partners like SkillsFund and Climb
- Corporate Training/B2B growth, which has risen from ~17,000 grads last year to ~23,000 grads in 2019



Note about Methodology: We survey actual schools for their graduation data each year. While there are other methods of estimating the bootcamp market like LinkedIn, we worry that those methods severely overestimate the market because students rarely list the course taken at a bootcamp. Part-time or intro classes are often not outcomes-focused, so including them in a Coding Bootcamp Market Size is flawed. When we measure the market size each year, we are including only graduates of full-time, immersive bootcamps.

Types of Bootcamps: 4 Models

Coding bootcamps have different academic models than traditional universities which allow them to serve the needs of a variety of learners. There are 4 bootcamp models in the space: **Full-Time In-Person, Full-Time Remote, Self-Paced, Part-Time Career-Focused**. While the subjects taught are similar across models (typically web development, mobile development, UX/UI design, data science, and project management), the time commitment, outcomes expectations, depth and delivery of curricula vary based on model.



FULL-TIME, IN-PERSON BOOTCAMPS

These are the schools that we typically think about when talking about **"coding bootcamps."** Immersive, full-time, in-person – students attend class for 40-80 hours each week in a classroom. Immersive bootcamps usually last 2 months to 7 months. Classes are held full-time and students can use facilities after class to review concepts and work on projects. Many intensive bootcamp students put in 80 hour weeks. To attend an intensive bootcamp, students must be prepared to give up their fulltime job and limit outside activities for the course of the program. The Flatiron School Software Engineering Immersive, **Turing School's Back-End Engineering Bootcamp**, and Codesmith's **Software Engineering Immersive** are examples of this model.



FULL-TIME, REMOTE BOOTCAMPS

Online Coding Bootcamps almost mimic the classroom experience – these are full-time bootcamps that require 40-60 hours per week (this is no MOOC)! Typically, online bootcamps will either use pre-existing tools like Zoom Pro and build communities on Slack. Schools like Hack Reactor Remote, Thinkful's Engineering Immersion, and Lambda School's Full Stack Web Immersive are immersive, instructor-led bootcamps. Like their in-person counterparts, online bootcamps teach UX design, data science, and software development, have outcomes-oriented curricula that include one-on-one instructor/mentor guidance, interaction with classmates, and targeted career coaching.

Types of Bootcamps: 4 Models

SELF-PACED ONLINE

Self-Paced Online Bootcamps require less of a time commitment each week (~10-20 hours) but take longer to complete. Typically, students complete curriculum and projects on their own schedule and meet with a mentor several times each week. Most online schools also have an online community where students can connect with each other. One plus? You can enjoy the benefits of bootcamp from the comfort of your own home and don't need to quit your job to upskill. Thinkful's Engineering Flex and Springboard's Software Engineering Career Track are great examples of the self-paced online bootcamp.



PART-TIME, CAREER-FOCUSED

Part-time coding bootcamps usually meet on nights and weekends. Students study programming over a longer period of time (~6-9 months) and spend 6-15 hours per week in class and another 10-15 hours per week on outside work. Students in part-time bootcamps usually hold part-time or full-time jobs in addition to class. The goal for a part-time bootcamper is typically to land a new job or get a promotion at work, but some parttime students' goals are to simply add new tools to their resume. For example, a Product Manager may take a part-time coding bootcamp to become more fluent with developers at work. Examples of quality part-time bootcamps are Actualize's Nights and Weekends Course or DevMountain's After Hours User Experience Design Course.

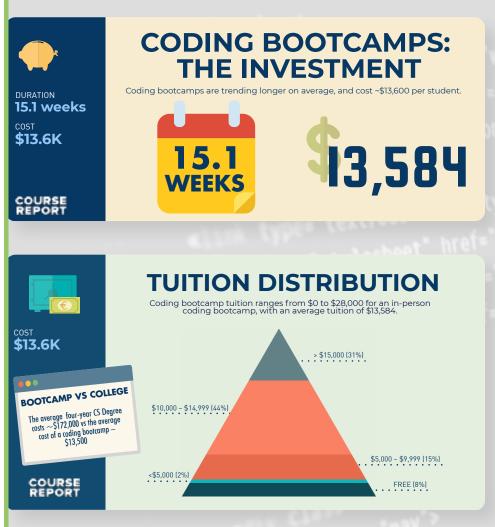
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The Cost of a Coding Bootcamp in 2020

Tuition ranges from \$0 to \$28,000 for an in-person coding bootcamp, with an average tuition of \$13,584. The average online bootcamp costs \$12,898 and lasts 24.3 weeks.

The cost of a bootcamp education doesn't even compare to a 4-year degree: While coding bootcamps cost an average of \$13,584, the tuition at top CS programs can be triple or quadruple that in just one academic year. Carnegie Mellon undergraduate tuition and tuition at the Massachusetts Institute of Technology (MIT) is about \$60,000-70,000 per year. Students also must consider opportunity cost and living cost – the longer you are studying, the longer you will have to make ends meet on a tight budget.

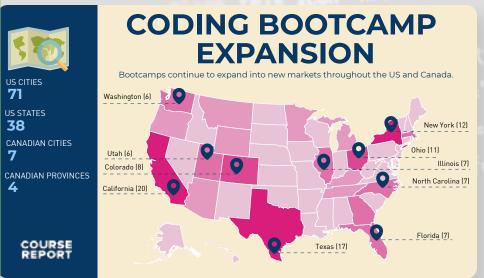
TREND ALERT: Over the years, coding bootcamps have gotten much longer: from just under 11 weeks in 2015 to just over 15 weeks in 2019. And interestingly, we find that the **length of the bootcamp** actually does have an impact on post-graduation average salary: the average salary after an 8-week bootcamp is \$58,248 versus the average salary after a bootcamp that's longer than 16 weeks, which is \$71,103. While most bootcamps are 12-14 weeks long, schools like Turing School (7 months), Ada Developers Academy, and Holberton (up to 2 years) are examples of longer bootcamps.



Bootcamp Locations: The US + International

As of June 1, 2019, there are coding bootcamp courses in 71 US cities and 38 states, and 14 online. Location data is from a sample of 180 courses from all 96 qualifying schools.

6 Canadian bootcamps graduated 888 students in 2018, will graduate an estimated 1,057 in 2019, and will generate \$12,056,406 in revenue in 2019. The most popular teaching language in Canadian bootcamps is divided evenly between Ruby on Rails and MEAN Stack. As of June 1, 2019, there are coding bootcamp courses in 7 Canadian cities and 4 provinces. viewport content="widt shortcut icon" href="/f



Curriculum at Coding Bootcamps

Full-Stack Web Development continues to dominate bootcamp curricula – 94% of coding bootcamp grads learn Full-Stack Web Development. Web Development coding bootcamps have historically been taught using Ruby on Rails, Full-Stack JavaScript, .NET/C#, Java, Python, or PHP. In 2019, Full-Stack JavaScript has maintained its position as the primary teaching language. 44% of courses reported Full-Stack JavaScript as the primary programming language. Not only are schools new to the market choosing JavaScript, but established bootcamps are also migrating their curricula to emphasize JavaScript.

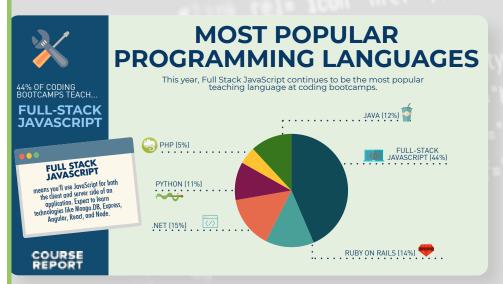
Coding bootcamps are hotbeds for innovation; because they're 3 months long, bootcamps can iterate quickly on their curriculum based on market trends and employer needs. The skills you learn at a bootcamp can range – you'll probably learn HTML/CSS, JavaScript, a backend language like Rails or Java. But a lot of instructors and industry folks will tell you that the programming language itself doesn't matter; what you're really learning is how to learn a new language. And that's a skill that employers tell us they appreciate time and time again.

JOB CURRICULUM

On top of the technical curriculum, most bootcamps offer services to help prepare students for the job market. Almost all students report receiving some form of assistance: career days, resume prep, apprenticeship, onsite interviews, and more. The most popular services offered are resume assistance and networking events.

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Salaries After Coding Bootcamp

The majority of graduates of coding bootcamps are finding full-time employment, and 83% of graduates surveyed say they've been employed in a job requiring the technical skills learned at bootcamp, with a median salary increase of 51% or \$22,000. The average starting salary of a bootcamp grad is \$66,964. Course Report's Annual Outcomes & Demographics Study dives into graduates' success, analyzing not only demographics and outcomes, but also how previous experience, income, location, and other factors impact a student's average salary and ability to get a job.

As bootcamp grads progress in their careers, salaries rise as well. **In our latest survey**, Course Report found that in their second jobs, bootcamp graduates earn around \$78,000 per year, and by their third jobs, alumni report earning, on average, \$90,990 per year! This data confirms that as new grads become more experienced developers, they're also increasingly valuable to their teams and companies (and can command higher salaries).

Other factors like **Location certainly impact salaries** – graduates working in California see the highest salaries; the average is \$100,482. Next up is New York, where grads make an average of \$74,756. Interestingly, graduates who studied online had the third highest average salary of \$70,500. However, living costs are likely to be higher in those tech hubs in California and New York, so students should make sure to take that into consideration when looking for a job

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ARE BOOTCAMPS WORTH IT?

83% of graduates have been employed in a job that leverages the skills they learned at bootcamp – and they get a **51% salary raise** after graduating!



Coding Bootcamp Demographics

The average bootcamper has **6 years of work experience**, has at least a **Bachelor's degree**, and has **never worked as a programmer**. However, the number of students with degrees appears to be declining slightly over time.

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THE AVERAGE BOOTCAMPER

The typical coding bootcamper is **31 years old**, has **6 years of work experience**, has at least a **bachelor's degree**, and has **never worked as a programmer**.



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Income Share Agreements + Deferred Tuition

ISAs and Deferred Tuition can align a school's incentives with those of their students. Essentially, if their students aren't successful, then neither is the school. However, these payment offerings require schools to take on additional risk, so you shouldn't expect to see every school offering deferred tuition or ISAs. The terms and conditions between bootcamps are also incredibly nuanced, so students should do additional research to understand whether there is a cap on repayments, minimum salaries that trigger repayment, and the total amount paid compared to a traditional loan.

WHAT IS DEFERRED TUITION?

Deferred tuition means students pay no upfront tuition (or very little), then start paying a set tuition amount once they graduate and find a job. You should expect to see a fixed total tuition cost that you will pay to the school in installments.

WHAT IS AN INCOME SHARING AGREEMENT OR ISA?

An income sharing agreement means students agree to pay a percentage of their salary to the school for a set period of time. Depending on the school, the percentage can range from 8% to 25%, and you may be sharing your income for 1 year to 4 years. ISAs have also been popularized by colleges like Purdue University – though the minimum salary that triggers repayment at Purdue is \$20,000, which pales in comparison to the \$40-50K minimum salaries we see from bootcamps. At the end of the day, Income Sharing Agreements are another way for schools to show potential students that they're confident in their ability to get students jobs. Our recommendation is to ask the school for an Outcomes Report – that's the most transparent method to see if they get their students jobs.

Income Sharing Agreements are financial instruments (like a loan). But they currently fall into a bit of a grey area. Many schools use a third-party organization like **Vemo Education** or **Leif** to design, implement, and "take the complexity out of" offering Income Sharing Agreements. We expect 2020 to bring regulation to the ISA industry.

WHAT ARE THE ADVANTAGES OF DEFERRED TUITION AND ISAS?

- ISAs and Deferred Tuition can align the school's incentives with those of their students. If their students aren't successful, then neither is the school.
- Takes the pressure of upfront tuition off of students
- Expands accessibility to bootcamps to a wider pool of students by making it possible for a student without \$20,000 in savings to enroll
- Job guarantees can be heavily regulated, so deferred tuition and ISAs are another way to prove to students that a bootcamp's incentives are aligned with the goals of their students



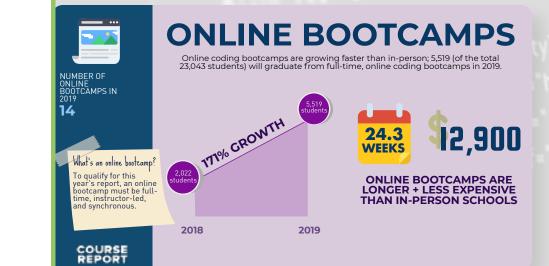
Online Bootcamps in 2020

Online coding bootcamps offer convenience and structure without forcing students to quit their job or move to a new city. 5,519 developers graduated from 14 of these full-time, remote bootcamps in 2019 and we expect this space to continue growing. The average online bootcamp costs \$12,898 and lasts 24.3 weeks.

MOOCs have infamously low graduation rates, but online coding bootcamps are not MOOCs! Schools like Hack Reactor Remote, Thinkful, and Lambda School are offering immersive, instructor-led bootcamps that keep students engaged and even guarantee jobs. Like their in-person counterparts, online bootcamps teach **UX design, data science, and software development**, have **outcomes-oriented curricula** that include **one-on-one instructor/mentor guidance, interaction with classmates**, and **targeted career coaching**.

Each year, we spend months choosing a **list of the best online bootcamps**. But remember, there is no ultimate "best online coding boot camp" – the best code school for you depends on your own learning style, availability, and career goals. No matter how many accolades a school has, **make sure to do your research**: read reviews, talk to alumni, take an intro course, and ask about job outcomes data.

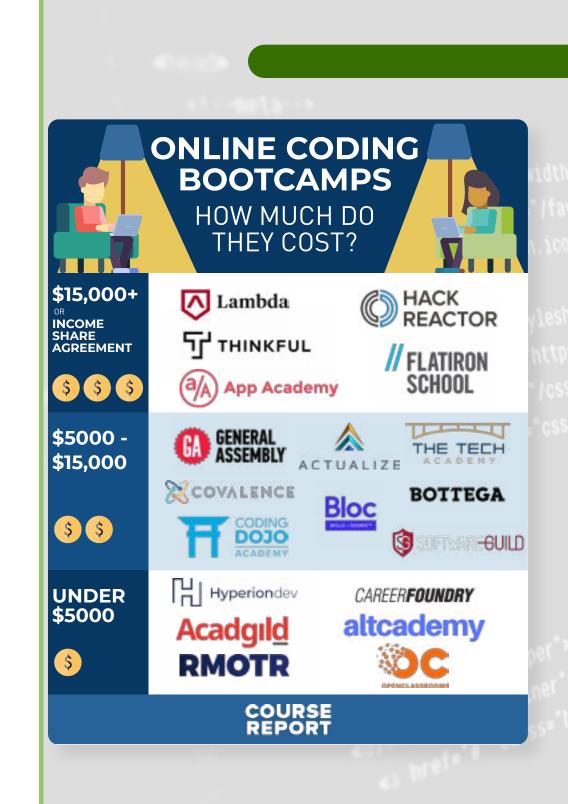
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Online Bootcamps in 2020

Typically, online bootcamps will either use pre-existing tools like Zoom Pro and build communities on Slack. Some schools like Software Guild have built their own proprietary learning platforms. Remember that learning to code online is different than learning in a classroom. Here's our advice:

- First, find a course that supports your learning style.
- Be sure to carve out time to dedicate to the online bootcamp and make the most of your support network (instructors, mentors, alumni network, etc).
- Take advantage of offline opportunities like Meetups or Thinkful Communities
- Finally, code every day and network aggressively to get a job when you graduate!



Coding Bootcamp Acquisitions & Consolidation

In 2019, we estimate that the bootcamp industry saw \$170MM in fundraising (not including debt financing). The largest fundraises of 2019 included:

- Online bootcamp Lambda School raised \$30 million in January to expand its income sharing agreement (ISA)
- Make School also raised \$15 million in series B funding in April in order to expand to New York City
- Kenzie Academy raised \$7.8 million in Series A funding to expand to students online and in the Midwest
- Momentum coding bootcamp in Durham, North Carolina, raised
 \$2.75 million to strengthen its existing immersive courses run by former Iron yard execs.
- Springboard raised \$11M to expand mentor-driven coding bootcamps

Until 2019, the largest coding bootcamp acquisition deal was certainly General Assembly being scooped up by staffing firm Adecco for "\$400MM. In 2019, 2U broke that record by **buying Trilogy Education**, which runs bootcamps at universities across the US and around the world. 2U paid \$400 million in cash and issued \$350 million in stock to buy Trilogy. Later in the year, **Thinkful was acquired by Chegg** for about \$80 million in cash. And New York-based bootcamp Fullstack Academy was **acquired** by Bridgepoint Education in a deal worth potentially "\$50M. Below is an infographic of every bootcamp acquisition since 2014:



Dev Bootcamp Acquired by Kaplan Test

Prep. Shut down in 2017.

BrainStation

dev

camp

2014

NOV

2014

Zipfian

Academy

Acquired by Galvanize

(then called gSchool) to become 12-week Data

Science offering.

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Coding Bootcamp Acquisitions & Consolidation Cont'd

3 WAYS THE BOOTCAMP INDUSTRY IS CONSOLIDATING

Bootcamps Acquiring Other Bootcamps

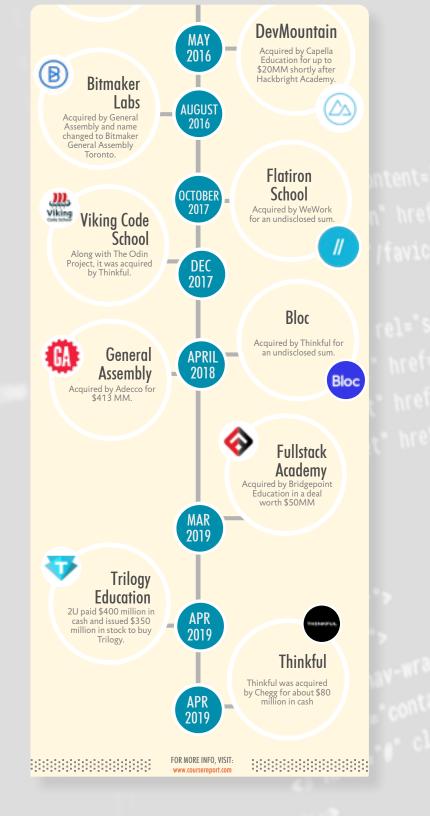
 Bootcamps have been acquiring other bootcamps since 2015. This is a great way to expand into markets where a school has lower name recognition. For example, Fullstack Academy acquired StarterLeague in Chicago in 2016 and now runs a thriving Chicago campus. Another motivation is to buy out competition, as in the case of Thinkful acquiring Bloc in 2018 (and previously The Viking School).

Traditional For-Profit Universities Acquiring Bootcamps

- Capella Education (now Strategic Education) acquired Hackbright Academy and DevMountain in 2016. We know from Strategic Education's most recent quarterly filings that the bootcamps are now generating returns for the company.
- While some of these deals have been successful, others have been a letdown. Dev Bootcamp was acquired by Kaplan in 2014 and The Iron Yard was bought by Apollo Education in 2015 – by 2017, both schools had been shut down by their parent companies.

Education & Staffing Companies Broadening Portfolios

- Trilogy Education was acquired by 2U for ~\$750MM, expanding 2U's hold in higher education program management.
- Swiss staffing firm acquired General Assembly for \$413MM and WeWork acquired Flatiron School – both deals present an opportunity to expand the pipeline from training to employment and placement.



Regulation & Criticism of the Bootcamp Industry

Generally, coding bootcamps are not accredited. But the bootcamp you attend should be licensed by a state regulatory agency. Licensing often means that the school has to submit their curricula (and any major curricula changes) for approval, invest in liability insurance in case of closure, and publicize their course catalog. It does not mean that the code school is able to grant degrees.

State regulatory agencies like the California Bureau for Post Secondary Education (BPPE) and the Texas Workforce Commission (TWC) have cracked down on schools operating without a license (and online schools, which present even more ambiguity). Lambda School was recently fined by the BPPE in California, Flatiron School was fined by the Attorney General of New York, and as the industry gains more steam, it also gains attention from critics and regulators.

To combat that outside criticism, a coalition of bootcamps formed the Council on Integrity in Results Reporting (CIRR) in 2016 and started publishing student graduation and job placement data in a single, standardized framework. The Council on Integrity in Results Reporting (CIRR) is a non-profit whose members include both bootcamps and "stakeholder" organizations, who have developed a common framework for reporting on, documenting, and auditing student outcomes. CIRR schools must report their outcomes every six months, and their data must be backed up by documentation (meaning schools must collect written confirmation from students and employers or offer letters) and verified by a third-party.

Before CIRR, schools attempted to form NESTA. And around the same time, worked with the Obama Administration on EQUIP. Under the EQUIP program, in essence, a **university partnered with a coding bootcamp** and a quality assurance entity (QAE), and as a result, students could effectively **get financial aid** and/or college credit for completing a coding bootcamp. The DOE called these partnerships "test sites" and announced awarded \$17M in grants in August 2016.

University Bootcamps

Universities have now been partnering with coding bootcamps since 2016, but there is a ton of nuance between these university bootcamps. There are over 60 university bootcamps in 2020 and that number continues to grow. The majority of university bootcamps are operated by Trilogy Education. Trilogy bootcamps are offered through the Continuing Education Department at each university and do not qualify for federal student loans or college credit. Competitors to Trilogy, like Noodle Partners and Quickstart Education, have broken into the market in 2019 as well. Other university coding bootcamps offer college credit, like Dominican University and Make School. Portland coding bootcamp **Epicodus** has partnered with Warner Pacific University to create a program called **sourceU**, where students take introductory college classes through the university, then do Epicodus' 27-week web and mobile development course. Students then take an additional 4 months of WPU courses, before graduating with an Associate's Degree.

TIPS FOR CHOOSING THE BEST UNIVERSITY CODING BOOTCAMP

- Ask for Student Outcomes! Yes, the prestige of a university being involved with a coding bootcamp is impressive

 but the appeal of a coding bootcamp is that you get
 relevant, hands-on training that employers are looking for.

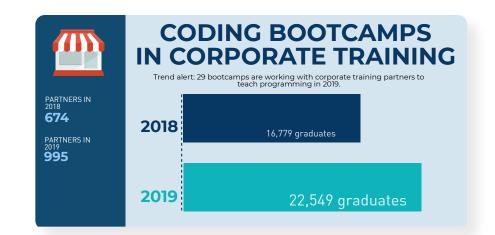
 If your goal is to get a job after graduating, then be sure to ask the bootcamp for data about their alumni. What's the graduation rate? What percentage of graduates are employed within 3 months? What's their average starting salary? These are all questions you can ask to be sure that the bootcamp will help you get a job after graduating.
- Understand who will be teaching the course. Most often, a bootcamp instructor will be teaching this course – this means you can expect to learn from someone with realworld, professional experience. But if you're expecting a university professor, then be sure to ask about this upfront.
- Research the bootcamp itself. It can be easy to get caught up in fancy university names. After all, if an Ivy League university is associated with the bootcamp, it has to be the best, right? Wrong! Do as much research as you would for an independent bootcamp.

Corporate Training

According to the US Bureau of Labor Statistics, the **demand** for software developers is expected to grow by 17%, "much faster than average" by 2024, which is about 200,000 more roles. Software developers are **already expensive**, and "**harder than average to recruit**," so more and more companies are thinking about re-training their own workforce. For example, AT&T is currently **retraining 100,000 employees**. As the industry grows, these bootcamps have **identified a need** for companies to provide in-house training for their employees. Many bootcamps now offer a range of customizable **corporate training programs**. In **2019**, coding bootcamps trained 22,549 students in digital skills via 994 corporate training partners!

Bootcamps offer a number of ways to upskill/reskill employees in a corporate setting:

- On-site training
- Online training
- In-classroom training
- Custom hackathons
- Upskill current employees to keep them engaged and learning eg. this partnership with Liberty Mutual and The Software Guild
- Mentor or onboard new hires



2020 and Beyond: What's Next for Bootcamps

- Last year, we reported a lot about the Forever GI Bill; in 2020 we'll start to see more veterans taking advantage of VET TEC and depending on how that pilot goes, we could see even more veterans in bootcamps.
- We'll continue seeing bootcamps offering Income Sharing
 Agreements and regulation will catch up to this space.
- As the demand for cybersecurity and data professionals rises, bootcamps will continue to react and launch new courses to meet market demands.
- There is a lot of opportunity in university partnerships we hope to see rigorous and transparent outcomes standards applied to these university bootcamps.
- We'll see **CIRR grow** in it's importance and membership.

PREPPING FOR A BOOTCAMP

- 1. Coding bootcamp vs college: what's my best option?
- 2. Can I learn to code on my own?
- 3. Am I ready for a coding bootcamp?

NARROWING YOUR OPTIONS

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JOB PLACEMENT

11. Will I get a job after a coding bootcamp?12. What can I do after a bootcamp education?13. Are coding bootcamps accredited?

PREPARING FOR A CODING BOOTCAMP

1. Coding Bootcamp vs College: what's best for me?

Can you really learn everything you need for a job in the tech industry without a computer science degree? Here are 5 things to consider when deciding between 4 months vs. 4 years of school.

- Cost. The cost of a bootcamp is equivalent to one semester of a CS degree program, but leads to a rewarding average starting salary of 60-70K.
- Return on Investment. You can complete a bootcamp in less time and with less money while still holding the same earnings potential as a CS grad.
- **Time Commitment.** CS Degree programs require a longer time investment, which means deeper understanding and more practice hours. In contrast, you'll finish a bootcamp in a matter of weeks, but may need to spend some time doing self-study to get up to speed.
- Curriculum. For a more well-rounded understanding of computer systems and a general understanding of coding, a CS degree is a better option. To delve right into coding languages and their practical applications, bootcamp is the way to go.
- Career Outlook. If you want to launch or join a startup skip the CS degree and go to bootcamp. If becoming an executive at Google, Apple or Amazon is in your future, plan to earn a CS degree at some point down the road.

Further Reading: Check out our guide to Coding Bootcamps vs. College, read thoughts from a CS professor-turned-coding-bootcamp-instructor, and watch our CS Degrees vs Coding Bootcamps Webinar.

2. Can I learn how to code on my own?

Once you've decided to learn how to code, you may be wondering if you can teach just teach yourself. History says, "YES!" Plenty of successful developers are self-taught using books, online resources, etc. Here are 6 things to consider when deciding if you should attend a bootcamp or teach yourself.

- Prior coding experience. Students with a computer science background or knowledge of programming, may find it easier to teach themselves. However, if you have no knowledge of programming and would like to learn quickly, it's better to attend a coding bootcamp.
- **Coding curriculum.** It's difficult enough to learn to code, and if you don't have a guide, it's hard to know how to teach yourself. If you find it difficult to find the tools you need, consider a bootcamp with a set curriculum.
- Learning style. Have you tried to teach yourself a new technical skill in the past? Were your past self-teaching attempts a success? Work out what your learning style is. If you find that you learn well on your own, it's something you should try before bootcamp.
- **Time and commitment.** What is your Bootcamp ROI (Return on Investment)? You may save in the long run by paying for a bootcamp and reaping the benefits of a salary increase in just a few short months. Use the Bootcamp ROI calculator to determine your ROI.
- Your network. Do you know fellow programmers? Do you have contacts to find a job after you learn to code? If not, a bootcamp will surely provide a network and contacts, which are fundamental in any career transition.

 Set your goals. Are you a career changer or just seeking a new hobby? Take some time to self-teach before taking the plunge and quitting your job to join a bootcamp.

FOR MORE THOUGHTS ON SELF-STUDY VS. CODING BOOTCAMPS, READ BOOTCAMP VS. SELF-STUDY: THE COMPLETE GUIDE.

3. Am I ready for a coding bootcamp?

Coding Bootcamps are intensive programs; while very rewarding, a coding bootcamp will be stressful and will push you. Before attending a bootcamp, consider if it's the right fit for your learning style. Schools look for the following skills in intensive bootcamp applicants:

- Willingness to work hard this is particularly important when applying to an intensive bootcamp. It's a huge investment to spend 40-80+ hours a week over the course of several months to learn a new skill. You'll often hear the word grit throughout the admissions process, and that's exactly what schools are looking for in applicants. Bootcamps want to know that their students are committed to doing whatever it takes to succeed for the duration of the bootcamp. At the same time, make sure you avoid burnout.
- Ability to problem solve An intense curiosity and desire to problemsolve are vital, because many bootcamps offer limited lectures and instead require students to spend most of the day solving challenges on their own. During the technical coding challenge, your approach

to problem-solving can be even more important than solving the challenge.

- Interpersonal skills Whether it's called empathy or just "playing nice," a bootcamp is a team sport. You'll be spending the majority of your days learning alongside and coding with a small group of strangers. Those that demonstrate a desire to learn from and work with others will do well.
- Technical chops Depending on the school. you may be required to pass a coding challenge in your interview. If you're not quite ready, take a coding bootcamp prep program.

If a full-time coding bootcamp is not an option, consider a **part-time bootcamp** or **online bootcamp**.

NEXT STEPS:

- Complete a course on Codecademy, Treehouse or Udemy to discover if you like coding.
- Test your passion for coding at a weekend workshop like Railsbridge, Rails Girls, or Girl Develop It.
- Attend a meetup to build your own community of learners!

NARROWING YOUR OPTIONS

4. What type of bootcamp should I attend?

Acceptance rates at top coding bootcamps are notoriously low (some between 3-6%), but that doesn't mean that you're not ready to learn to code. Coding Bootcamps are generally upfront about the minimum demands they make on their students. Some "zero to sixty" code schools are meant to bring beginners into the fold and other "twenty to onetwenty" bootcamps aim to help current developers make a leap or learn a new technology stack. First, figure out what your own skill level is, and then find the bootcamp that aligns with that level.

Immersive coding bootcamps – Immersive bootcamps usually last 2 months to 7 months. Classes are held full-time and students can use facilities after class to review concepts and work on projects. Many intensive bootcamp students put in 80 hour weeks. To attend an intensive bootcamp, students must be prepared to give up their full-time job and limit outside activities for the course of the program.

Part-time coding bootcamps – Part-time coding bootcamps usually meet on nights and weekends. Students study concepts over a longer period of time and spend 6-15 hours per week in class and another 10-15 hours per week on additional concepts. Students in part-time bootcamps usually hold part-time or full-time jobs in addition to class.

Online coding bootcamps – More recently, the bootcamp trend has shifted thanks to online coding schools like Bloc, Thinkful, and other

popular programs. Even if you choose to study online, you'll still have options between flexible or full-time courses. Students complete curriculum and activities on their own and meet with a mentor several times each week. Most online schools also have an online community where students can connect with each other. One plus? You can enjoy the benefits of bootcamp from the comfort of your own home. Watch demos of online coding bootcamps here.

STUCK BETWEEN TWO BOOTCAMPS? HERE ARE A FEW COMPARISONS:

- Bloc vs. Thinkful (Online)
- Lighthouse Labs vs. CodeCore (Canada)
- Flatiron School vs. Dev Bootcamp (New York)
- App Academy vs. Flatiron School (New York)

5. Which city should I attend coding bootcamp?

While you will still find the majority of dev bootcamps in major tech hubs like **San Francisco** and **New York**, bootcamps have sprung up in smaller markets since 2012 (there are coding bootcamps in over 70 US cities)! Coupled with legitimate online coding schools that offer mentorship, you no longer need to move cities in order to get a solid education. Consider these things when making the decision:

• Where do you want to work after you graduate? If your goal is to get a job in your current city, then there's no reason to pack up yet!

- Do you have obligations in your current city? If you don't have ties or if you're just ready for a big move, then perhaps a fully immersive experience could be beneficial in freeing you from distractions and offering a new experience.
- Does your current city have a credible coding bootcamp option? The Midwest, South, and even Malaysia, all have credible coding bootcamps. It's not necessary to move cities (or countries) to get a solid foundation in programming and get a job as a software developer.

According to Course Report's latest **2016 Outcomes & Demographics Report**, cities with the highest average salaries remain the large tech hubs with plenty of developer jobs: San Francisco, Oakland, Seattle, New York City, Denver, and Los Angeles were among the cities with highest mean and median salaries. States like California, Washington, Texas, New York, and Colorado were among the states with highest mean and median salaries. Bootcamp grads in San Francisco saw the highest average salary of \$100,779!

6. Which programming language should I learn?

Coding bootcamps employ **teaching languages** to introduce students to the world of programming. While language shouldn't be the main deciding factor when choosing a bootcamp, students may have specific career goals that guide them towards a particular language.

In that case, first decide whether you'd prefer to learn **web or mobile development**. For the web, your main choices are **Ruby**, **Python**, **LAMP stack**, **MEAN stack** and **.NET languages**. For mobile, choose between **Java** for Android and **Swift** or **Objective-C** for iOS. Learning a specific language may lead you to a new job market and offer pathways to different career tracks, average salaries and areas of business. However, many recent bootcamp graduates find that they end up learning and using a completely different language on the job. There is no "right" or "wrong" language to learn!

FURTHER READING:

- Developing for iOS: Objective-C vs Swift (Webinar)
- Should You Learn .NET?
- Rails vs. Django: Which Should a Beginner Learn?
- Ruby vs. Python: Choosing your First Programming Language
- React vs. Angular

7. Where can I find coding bootcamp reviews?

Check out Course Report for thousands of **coding bootcamp reviews**! Our school directory is sorted by the number of verified reviews. You can also find reviews on **Quora** and **Yelp**.

If you've graduated from a bootcamp, you should **leave a review** to help future students make their decision.

APPLYING TO A CODING BOOTCAMP

8. What can I expect in a coding bootcamp interview?

While coding bootcamp interviews will differ by school, you can expect certain elements across the board. Some interviews will begin with a **"culture fit"** while others begin with the **coding challenge**. Some schools have only one interview to assess both culture and technical aptitude. Here's how to prepare:

Written or Video Application

- Read Quora, the bootcamp's website, and blogs by its founder, former students, and alumni.
- Prior to the application do some self-assessment to determine your reasons for going to bootcamp. Are you preparing for a new career? Trying to learn a new skill to get a promotion? Scoping out a new hobby?
- Set aside **at least one hour to answer** the questions thoroughly and also give yourself time to edit answers as needed.

Culture Fit Interview

- Brush up on some of the **online resources** you started with, the bootcamp itself and its founders.
- If you've built personal projects or worked on something technical at your current job, be prepared to walk the interviewer through your portfolio.

Technical Interview + Coding Challenge (optional)

Keep in mind that an interview is also an opportunity for you to have your questions answered so come in ready to pick the brain of your interviewer.

Most of all, don't freak out! If you're passionate about getting into coding and you study up, you have nothing to worry about. You're going into a bootcamp to learn better skills. They won't expect you to know everything- most importantly, show that you're **receptive to teaching** and **eager to learn**.

Many code schools have placement tests or **online pre-work assessments** that you complete as part of your application. Check out these tools for further practice:

- CodingDojo Algorithm Platform
- Epicodus Curriculum
- Tech Elevator Aptitude Test

FURTHER READING: 10 QUESTIONS YOU SHOULD BE ASKING IN YOUR CODE SCHOOL INTERVIEW, AND OUR ULTIMATE GUIDE TO BOOTCAMP PREP PROGRAMS

PAYING FOR BOOTCAMP TUITION

9. How much should I spend on coding bootcamp tuition? The average full-time programming bootcamp in the US costs \$11,450 with some bootcamps charging up to \$20,000 in tuition. When making a decision, first calculate your Return on Investment (ROI): do your research and compare bootcamp tuition costs to the average starting salary of past graduates. Be sure to consider the opportunity cost incurred by quitting your job, room & board, and any hidden fees from loans. Some bootcamps offer free or discounted housing. The amount of money that you're willing to invest should probably correlate strongly with the amount of time and energy that you're willing to put forth. Compare coding bootcamp tuition costs here.

10. How do I pay for bootcamp?

Bootcamps are expensive. Because code schools are not degree-granting institutions, most bootcampers don't qualify for traditional student loans like Pell Grants. As a result, many students put their tuition on a credit card, borrow money from friends and family, or use savings. As the coding bootcamp industry has grown, so too has the business of financing them. Most bootcamps offer **financing options, payment plans, and loan partnerships** through companies like **Skills Fund, Pave, Climb Credit** and

Affirm, in addition to scholarships and discounts for women, military veterans, and underrepresented minorities.

Other creative ways to pay for your code school tuition:

- Students who are already employed and are attending bootcamp to gain skills for their current job are often able to work out a **deal with** their employer to cover some if not all of the cost of the bootcamp.
- Crowdfunding your coding bootcamp tuition is always worth a try!
- Certain bootcamps like App Academy and Viking Code School won't demand tuition until you've been placed in a job.
- Ask the bootcamp if they offer a partial tuition refund if you accept a job with one of their hiring partners. Our research finds that 15% of graduates got a tuition refund this way.
- There are many great scholarship opportunities for coding bootcamps based on merit, gender, race, service in the armed forces, and financial need. Explore all of these options and don't leave money on the table that you could've been putting towards your education!
- Course Report offers exclusive scholarships and discounts to over 25 bootcamps. Check out this list to see if your dream bootcamp is on our list!

RESOURCES:

- Ultimate Guide to Coding Bootcamp Loans and Financing
- Bootcamp Scholarships for Women
- Bootcamp Scholarships for Veterans

- Exclusive Course Report Bootcamp Scholarships
- 7 Tips to Financially Prepare for a Coding Bootcamp
- The Definitive List of Programming Bootcamp Scholarships

JOB PLACEMENT

11. Will I get a job after graduating from a bootcamp?

Network and resources — If you're attending a bootcamp in hope of changing careers, then you should find out what services are offered. Some bootcamps set up prospective interviews with potential employers, while others offer resume workshops and provide a list of hiring partners.

Job Placement — Consider a bootcamp's job placement rate 30, 60, 90 and 120 days after the program. While some schools like App Academy SF only require you to pay if you get a job, most bootcamps don't follow this model. Some bootcamps provide this information publicly via an industry organization called CIRR, while others may require some digging on Course Report.

Before applying to the bootcamp, do your homework:

- Read about coding bootcamps and visit their website.
- If you can't find a Student Outcomes Report easily, ask the school to provide one (along with their methodology)
- Read programming bootcamp questions on Quora to read answers from bootcamps

- Read bootcamp reviews and interviews with Alumni
- Visit the bootcamp space and talk to an instructor if possible

12. Where can I go with my bootcamp education?

Coding bootcamp graduates go on to do so many cool things. Here are just a few examples:

- Get a job as a junior developer at a large company you've always admired.
- Join a small dev team at a startup.
- Take an apprenticeship and learn from the masters for a few months after graduating.
- Become a technical co-founder and help launch a product.
- Freelance while you travel the world.
- Work for another coding bootcamp as an instructor, teaching assistant, or support staff.
- Find a job as a technical product manager.
- Take on new projects at your current company (and get a promotion or a raise while you're at it)!

FURTHER READING: 6 JOBS YOU CAN LAND AFTER A CODING BOOTCAMP, AND CHECK OUT THE COURSE REPORT BLOG FOR GREAT ALUMNI STORIES.

13. Are Programming Bootcamps Regulated or Accredited?

Yes and no. Much of the appeal for a bootcamp is the agile curriculum and ability to teach the latest technologies. While a few coding bootcamps have been "shut down" by their state's regulatory agencies, many are actively working with those agencies to become accredited. Accreditation does not mean that the code school is able to grant degrees. So what does it mean? Accredited coding bootcamps often have to submit their curricula (and any major curricula changes) for approval, invest in liability insurance in case of closure, and publicize their course catalog. Here's an interesting perspective on accreditation from **Bitmaker Labs CEO Craig Hunter.**

Coding Bootcamps have caught the attention of many politicians and government bodies, including the White House Office of the CTO, President Obama (who launched the **TechHire initiative** in March 2015), and the current administration.

In March 2017, **CIRR** (Council on Integrity in Results Reporting) was announced as a group of over 50 bootcamps and member organizations who have developed a common framework for reporting, documenting, and auditing bootcamp student outcomes. This new coalition (which includes Course Report) is committed to publishing student graduation and job placement data in a single, standardized framework. Learn more as we break down CIRR **here**.

FURTHER READING:

CIRR: JOB PLACEMENT REPORTING FOR BOOTCAMPS

About Course Report

Since 2012, Course Report has been the leading authority on immersive technology education, cited in the New York Times, the Wall Street Journal, the San Francisco Chronicle, TechCrunch, GeekWire, EdSurge and more. We conduct in-depth research on the industry, track trends in coding education, share student stories, produce a monthly podcast, and host thousands of alumni reviews.

Course Report has everything you need to choose the bootcamp that's right for *you*.