Developer Profile   Technology   AI   Work   Community   Professional Developers   Methodology

2024
**Developer
Survey**

Products

Developer Profile 1

What we know about the global community of developers.

Education   1.1

Educational attainment

66% of developers have a BA/BS or MA/MS degree despite only 49% of

developers learning to code at school.

Developer Profile   Technology   AI   Work   Community   Professional Developers   Methodology
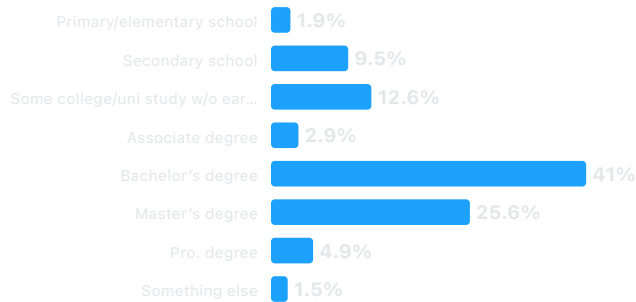
? Which of the following best describes the highest level of formal education that
you've completed? *

All Respondents   Professional Developers   Learning to Code   Other Coders

Primary/elementary school   1.9%
Secondary school   9.5%
Some college/uni study w/o ear…   12.6%
Associate degree   2.9%
Bachelor's degree   41%
Master's degree   25.6%
Pro. degree   4.9%
Something else   1.5%

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Learning to code   1.2

Developer Profile   Technology   AI   Work   Community   Professional Developers   Methodology

Learning to code

Online resources are the top choice for developers to learn code according to 82% of responses.
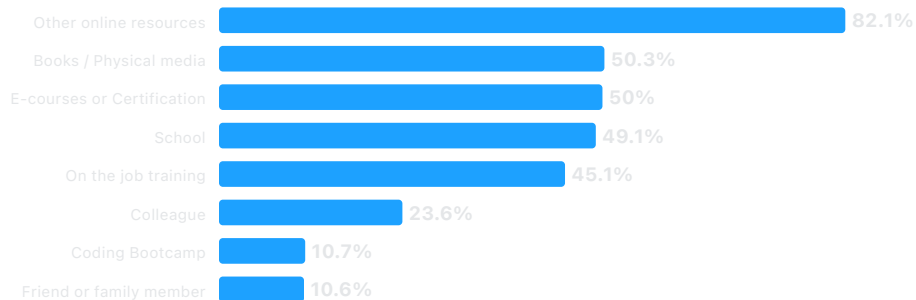
Respondents 18 – 24 years old are most likely to learn code at traditional schools of all the age groups, and consistently so for the last three years.

? How do you learn to code? Select all that apply.

All Respondents	Learning to Code By Age

Other online resources — 82.1%
Books / Physical media — 50.3%
E-courses or Certification — 50%
School — 49.1%
On the job training — 45.1%
Colleague — 23.6%
Coding Bootcamp — 10.7%
Friend or family member — 10.6%

⬇ Download   ↗ Share   Responses: **59,912** (**91.6%**)

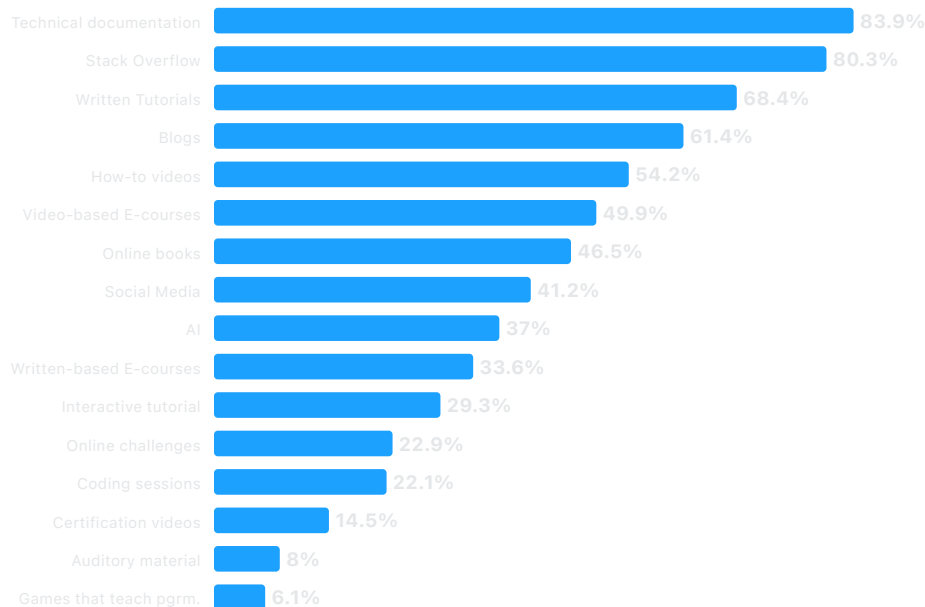# online resources to learn how to code

Technical documentation (84%) and Stack Overflow (80%) continue to be the top online resources to learn code. 37% of responses indicate AI is helping them learn, too.

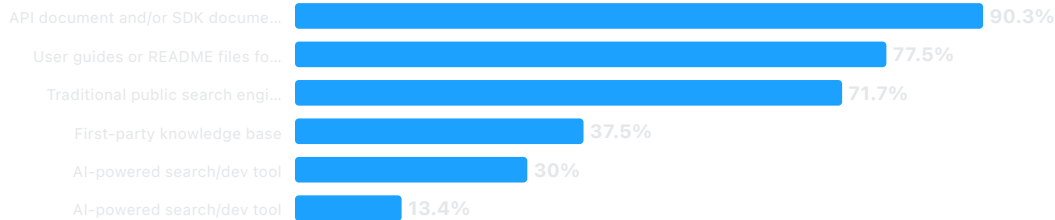[?] What online resources do you use to learn to code? Select all that apply.

Technical documentation	83.9%
Stack Overflow	80.3%
Written Tutorials	68.4%
Blogs	61.4%
How-to videos	54.2%
Video-based E-courses	49.9%
Online books	46.5%
Social Media	41.2%
AI	37%
Written-based E-courses	33.6%
Interactive tutorial	29.3%
Online challenges	22.9%
Coding sessions	22.1%
Certification videos	14.5%
Auditory material	8%
Games that teach pgrm.	6.1%

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Technical documentation preferences to learn how to code

API and SDK documents are the documentation source of choice for 90% of developers.

Developer Profile   Technology   AI   Work   Community   Professional Developers   Methodology

code? Select all that apply.

API document and/or SDK docume...	90.3%
User guides or README files fo...	77.5%
Traditional public search engi...	71.7%
First-party knowledge base	37.5%
AI-powered search/dev tool	30%
AI-powered search/dev tool	13.4%

⬇ **Download**   ⧉ **Share**   Responses: **40,602** (**62%**)

Experience   1.3

Years coding

More than 1 in 3 developers that took the survey this year have been coding as long as or longer than Stack Overflow existed. 38% of respondents have been coding for 15 years or more.

❓ Including any education, how many years have you been coding in total?
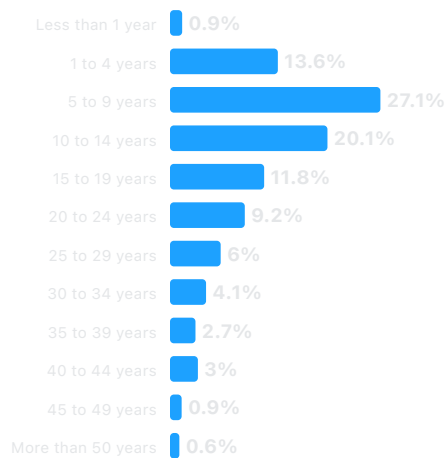
Developer Profile   Technology   AI   Work   Community   Professional Developers   Methodology

Less than 1 year	0.9%
1 to 4 years	13.6%
5 to 9 years	27.1%
10 to 14 years	20.1%
15 to 19 years	11.8%
20 to 24 years	9.2%
25 to 29 years	6%
30 to 34 years	4.1%
35 to 39 years	2.7%
40 to 44 years	3%
45 to 49 years	0.9%
More than 50 years	0.6%

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Years coding professionally

1 in 3 developers have been coding professionally for four years or less.

❓ NOT including education, how many years have you coded professionally (as a part of your work)?
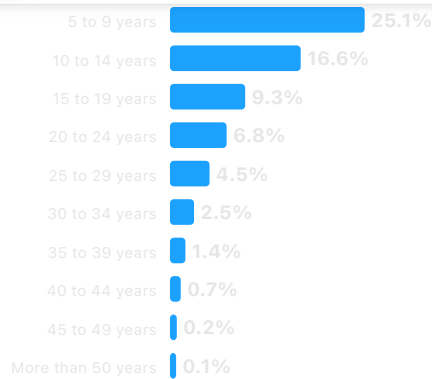
Developer Profile   Technology   AI   Work   Community   Professional Developers   Methodology

5 to 9 years	25.1%
10 to 14 years	16.6%
15 to 19 years	9.3%
20 to 24 years	6.8%
25 to 29 years	4.5%
30 to 34 years	2.5%
35 to 39 years	1.4%
40 to 44 years	0.7%
45 to 49 years	0.2%
More than 50 years	0.1%

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Years of professional coding experience by developer type

People managers such as executives and engineering managers are reporting the highest average years of coding this year with more than 15 years of experience, while popular developer roles such as back-end and full-stack developers are reporting 10-11 years experience on average.

?   NOT including education, how many years have you coded professionally (as a part of your work)?

Developer Profile   Technology   AI   Work   Community   Professional Developers   Methodology
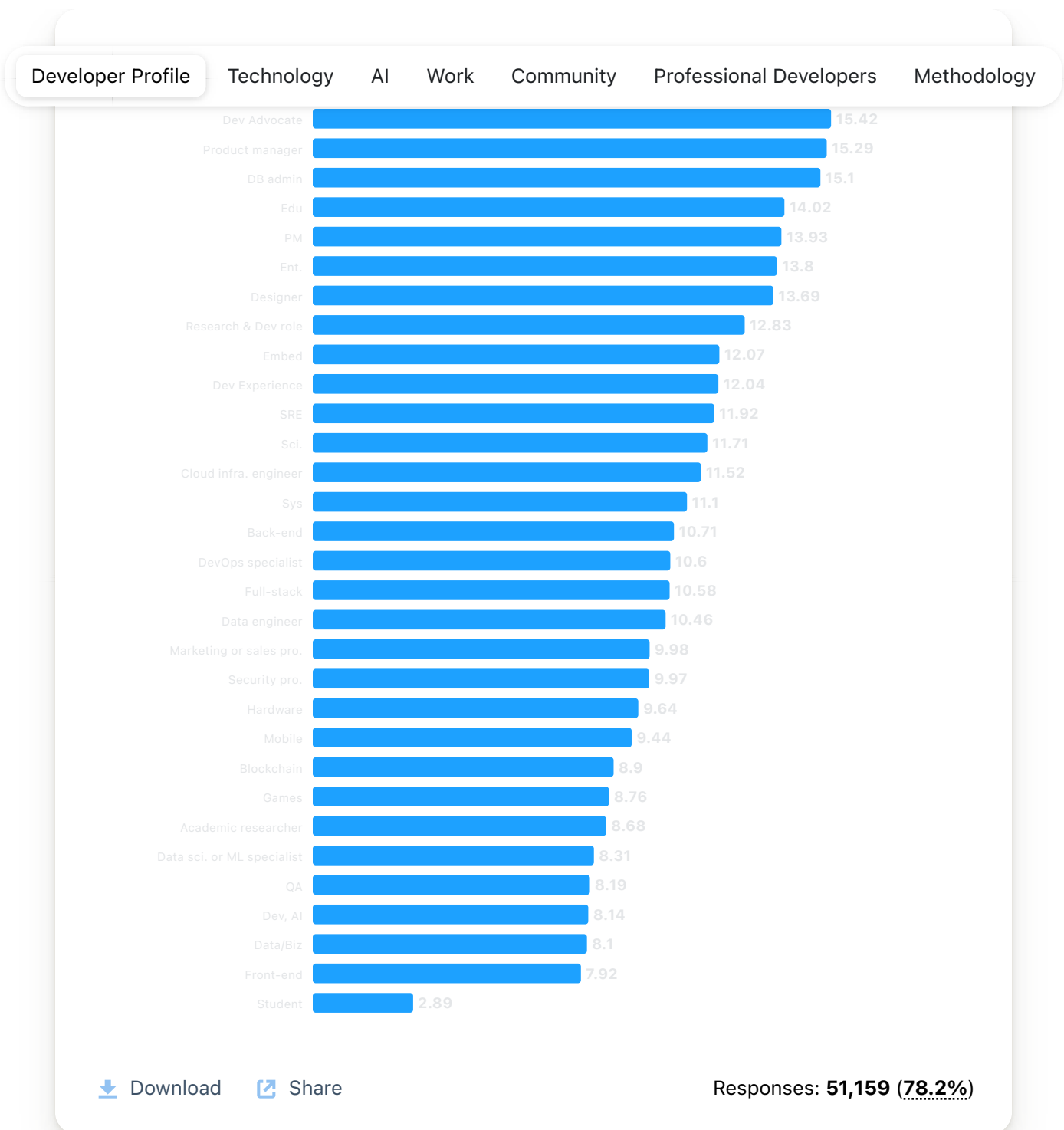
Role	Value
Dev Advocate	15.42
Product manager	15.29
DB admin	15.1
Edu	14.02
PM	13.93
Ent.	13.8
Designer	13.69
Research & Dev role	12.83
Embed	12.07
Dev Experience	12.04
SRE	11.92
Sci.	11.71
Cloud infra. engineer	11.52
Sys	11.1
Back-end	10.71
DevOps specialist	10.6
Full-stack	10.58
Data engineer	10.46
Marketing or sales pro.	9.98
Security pro.	9.97
Hardware	9.64
Mobile	9.44
Blockchain	8.9
Games	8.76
Academic researcher	8.68
Data sci. or ML specialist	8.31
QA	8.19
Dev, AI	8.14
Data/Biz	8.1
Front-end	7.92
Student	2.89

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Developer roles   1.4
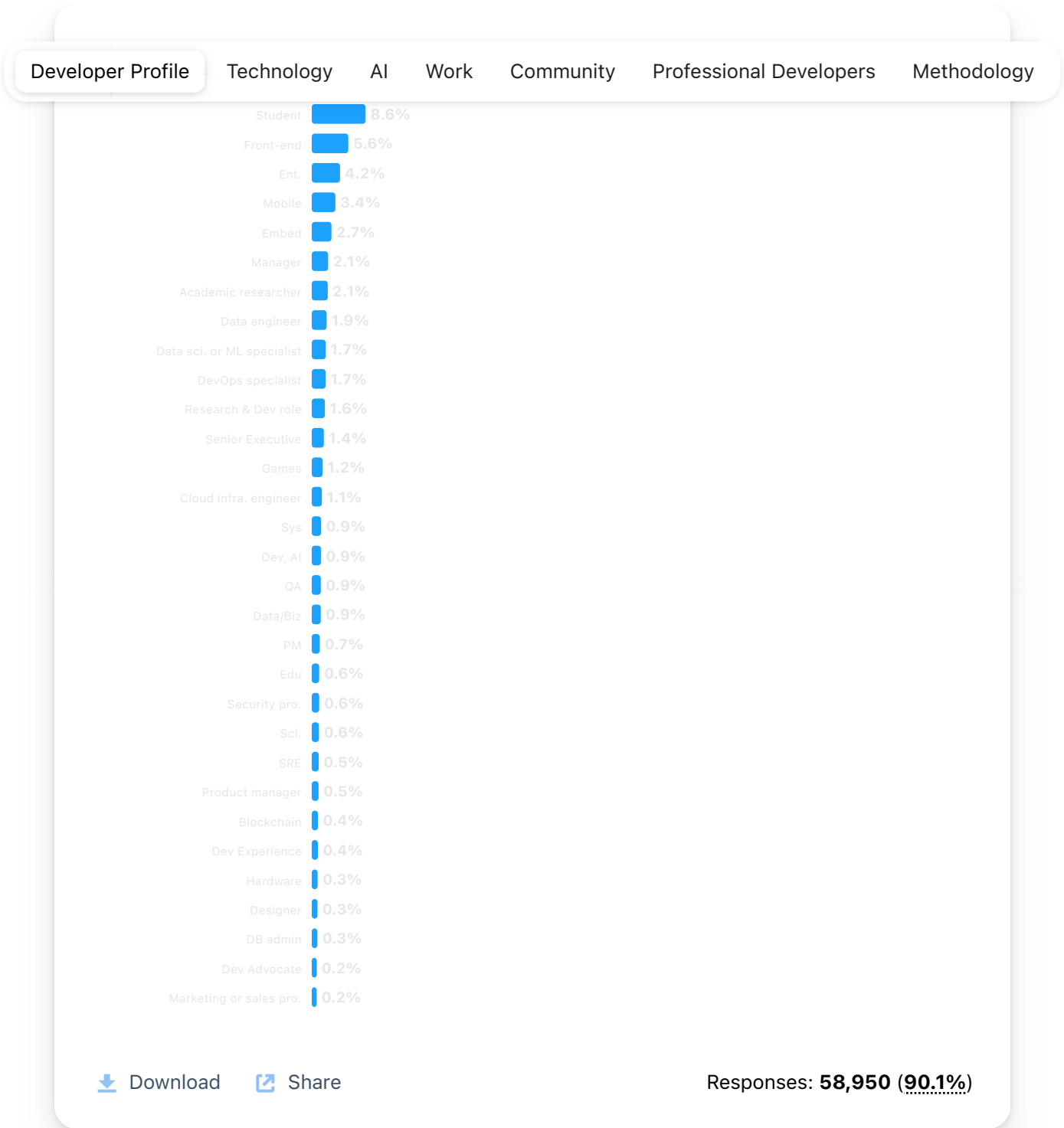
Developer type

Full-stack, back-end, and front-end developers were the top three roles reported by developers for the last three years; however, front-end developers have decreased from 6.6% to 5.6% since last year. This year, more developers identify as students than as front-end employees and we saw a slight increase in developers who have an embedded applications role or are academic researchers.

> **?** Which of the following describes your current job, the one you do most of the time? Please select only one.

Developer Profile Technology AI Work Community Professional Developers Methodology

Student	8.6%
Front-end	5.6%
Ent.	4.2%
Mobile	3.4%
Embed	2.7%
Manager	2.1%
Academic researcher	2.1%
Data engineer	1.9%
Data sci. or ML specialist	1.7%
DevOps specialist	1.7%
Research & Dev role	1.6%
Senior Executive	1.4%
Games	1.2%
Cloud infra. engineer	1.1%
Sys	0.9%
Dev, AI	0.9%
QA	0.9%
Data/Biz	0.9%
PM	0.7%
Edu	0.6%
Security pro.	0.6%
Sci.	0.6%
SRE	0.5%
Product manager	0.5%
Blockchain	0.4%
Dev Experience	0.4%
Hardware	0.3%
Designer	0.3%
DB admin	0.3%
Dev Advocate	0.2%
Marketing or sales pro.	0.2%

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Key territories   1.5

Geography
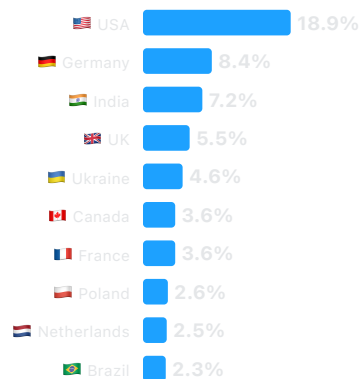
52% of respondents shared their country in this year's survey. The top 10 countries account for 60% of those that were given, and Europe accounts for most of the top-responding countries.

❓ Where do you live? *****

Top 10 Countries	All Countries

🇺🇸 USA   **18.9%**
🇩🇪 Germany   **8.4%**
🇮🇳 India   **7.2%**
🇬🇧 UK   **5.5%**
🇺🇦 Ukraine   **4.6%**
🇨🇦 Canada   **3.6%**
🇫🇷 France   **3.6%**
🇵🇱 Poland   **2.6%**
🇳🇱 Netherlands   **2.5%**
🇧🇷 Brazil   **2.3%**

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Demographics   1.6

Age

Most developers in the survey this year report being 25 - 34 years old

(37%). That number increases for professional developers to 42% and

? What is your age?*

All Respondents   Professional Developers   Learning to Code   Other Coders

Under 18 years old	3.9%
18-24 years old	21.4%
25-34 years old	36.5%
35-44 years old	22.9%
45-54 years old	9.6%
55-64 years old	4%
65 years or older	1.2%
Prefer not to say	0.5%
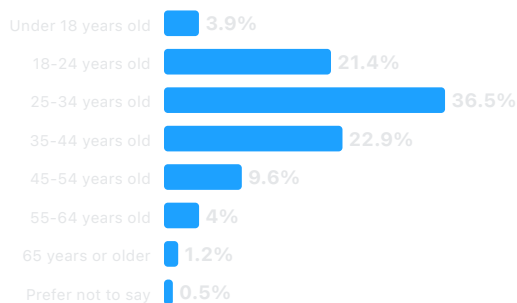
Download   Share   Responses: **64,287** (**98.2%**)

Next

Technology

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