

Welcome

Hello world!

Thank you for taking the 2022 Stack Overflow Developer Survey, the longest running survey of software developers (and anyone else who codes!) on Earth.

As in previous years, anonymized results of the survey will be made publicly available under the Open Database License, where anyone can download and analyze the data. On that note, throughout the survey, certain answers you and your peers give will be treated as personally identifiable information, and therefore kept out of the anonymized results file. We'll call out each of those in the survey with a note saying "This information will be kept private."

There are seven sections in this survey. The 2nd, 3rd, and 4th sections will appear in a random order.

- 1. Basic Information
- 2. Education, Work, and Career
- 3. Technology and Tech Culture
- 4. Stack Overflow Usage + Community
- 5. Demographic Information
- 6. Professional Developer Series (Optional)
- 7. Final Questions

Most questions in this survey are optional. Required questions are marked with *. This anonymous survey will take about 10 minutes to complete. We encourage you to complete it in one sitting.

If you use security or ad-blocking plugins, you may see error messages

Our third-party software provider, Qualtrics, does not work well with certain ad blockers and security software. To avoid error messages that prevent you from taking the

survey, please try specifically unblocking Qualtrics in your plugin or pausing the plugin while you take the survey.

To begin, click Next.

Qualification

Basic Information

The first section will focus on some basic information about who you are.

Most questions in this section are required. Required questions are noted with *.

Which of the following options best describes you today? Here, by "developer" we mean "someone who writes code." *

I am a developer by profession	
I am not primarily a developer, but I write code sometimes as part of my work	
I used to be a developer by profession, but no longer am	
O I am learning to code	
O I code primarily as a hobby	
O None of these	
Employment	
Employment	
Which of the following best describes your current employment status?	
Which of the following best describes your current employment status?	
Which of the following best describes your current employment status? Employed, full-time	
Which of the following best describes your current employment status? Employed, full-time Employed, part-time	
Which of the following best describes your current employment status? Employed, full-time Employed, part-time Independent contractor, freelancer, or self-employed	
Which of the following best describes your current employment status? Employed, full-time Employed, part-time Independent contractor, freelancer, or self-employed Not employed, but looking for work	
Which of the following best describes your current employment status? Employed, full-time Employed, part-time Independent contractor, freelancer, or self-employed Not employed, but looking for work Not employed, and not looking for work	

☐ Retired
☐ I prefer not to say
Which best describes your current work situation?
C Fully remote
Full in-person
Hybrid (some remote, some in-person)
Which of the following best describes the code you write outside of work? Select all that apply.
·
that apply.
that apply. Hobby
that apply. Hobby Freelance/contract work
that apply. Hobby Freelance/contract work Contribute to open-source projects
that apply. Hobby Freelance/contract work Contribute to open-source projects Bootstrapping a business

L	Other (please specify):
	2 - Education + Work + Career
	Education, work, and career
	This section will focus on your education, work, and career.
	Most questions in this section are optional. Required questions are noted with *.
	Which of the following best describes the highest level of formal education that you've completed? *
	 Primary/elementary school Secondary school (e.g. American high school, German Realschule or Gymnasium, etc.) Some college/university study without earning a degree

Associate degree (A.A., A.S., etc.)
O Bachelor's degree (B.A., B.S., B.Eng., etc.)
Master's degree (M.A., M.S., M.Eng., MBA, etc.)
O Professional degree (JD, MD, etc.)
Other doctoral degree (Ph.D., Ed.D., etc.)
Something else
How did you learn to code? Select all that apply.
Books / Physical media
Coding Bootcamp
Colleague
Friend or family member
Hackathons (virtual or in-person)
Online Courses or Certification
On the job training
Other online resources (e.g., videos, blogs, forum)
School (i.e., University, College, etc)

	Other (please specify):
١	What online resources do you use to learn to code? Select all that apply.
	Technical documentation
	Blogs
	Online books
	Coding sessions (live or recorded)
	How-to videos
	Certification videos
	Video-based online courses
	Written-based online courses
	Auditory material (e.g., podcasts)
	Programming games
	Online challenges (e.g., daily or weekly coding challenges)
	Interactive tutorial
	Written tutorials
	Online forum

Other (Please specify):
What online courses or certifications do you use to learn to code? Select all that apply.
Codeacademy
Coursera
gedX
Pluralsight
Skillsoft
Udacity
Udemy
Other (Please specify):
Including any education, how many years have you been coding in total?

Stack Overflow

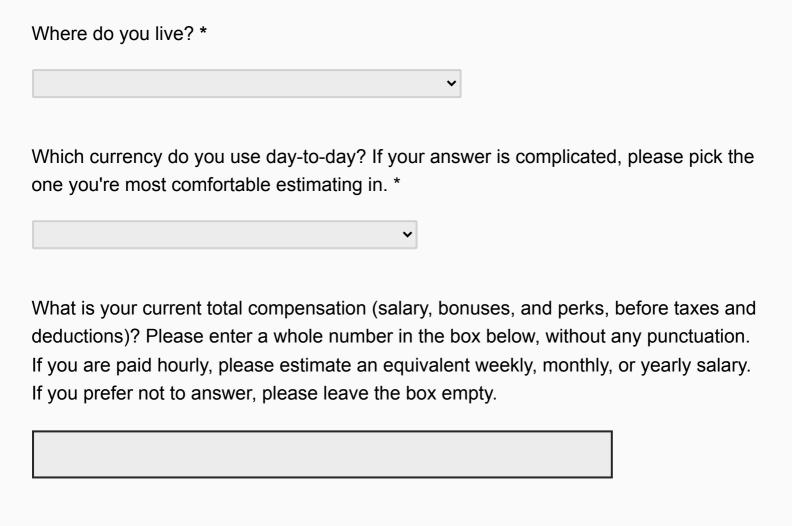
NOT including education, how many years have you coded professionally (as a part of your work)?
▼
Which of the following describes your current job? Please select all that apply.
Academic researcher
Cloud infrastructure engineer
Blockchain
Data or business analyst
Data scientist or machine learning specialist
Database administrator
Designer
Developer, back-end
Developer, desktop or enterprise applications
Developer, embedded applications or devices

Developer, front-end
Developer, full-stack
Developer, game or graphics
Developer, mobile
Developer, QA or test
DevOps specialist
Educator
Engineer, data
Engineer, site reliability
Engineering manager
Marketing or sales professional
Product manager
Project manager
Scientist
Senior Executive (C-Suite, VP, etc.)
Student
System administrator
Security professional

Other (please specify):
Approximately how many people are employed by the company or organization you currently work for? Just me - I am a freelancer, sole proprietor, etc. 2 to 9 employees 10 to 19 employees 20 to 99 employees 100 to 499 employees 500 to 999 employees
1,000 to 4,999 employees
5,000 to 9,999 employees
☐ 10,000 or more employees☐ I don't know

What level of influence do your organization?	you, personally, have over new technology purchases at
) I have little or no influence	
) I have some influence	
) I have a great deal of influe	nce
When buying a new tool o	r software, how do you discover and research available
solutions? Select all that a	apply.
Start a free trial	
Ask developers I know/work	c with
Visit developer communities	s like Stack Overflow
Read ratings or reviews on	third party sites like G2Crowd
Research companies that h	ave advertised on sites I visit
Research companies that h	ave emailed me
Ot	her (please specify):

C



Is that compensation weekly, monthly, or yearly?

Monthly Yearly
3 - Tech and Tech Culture
Tech and tech culture
The next set of questions will focus on technology and tech culture.
Most questions in this section are optional. Required questions are noted with *.
Which programming , scripting , and markup languages have you done extensive development work in over the past year, and which do you want to work in over the next year? (If you both worked with the language and want to continue to do so, please

check both boxes in that row.)

	Worked with in PAST year	Want to work with NEXT year
APL		
Assembly		
Bash/Shell		
С		
C#		
C++		
Clojure		
COBOL		
Crystal		
Dart		
Delphi		
Elixir		
Erlang		
F#		

	Worked with in PAST year	Want to work with NEXT year
Fortran		
Go		
Groovy		
Haskell		
HTML/CSS		
Java		
JavaScript		
Julia		
Kotlin		
LISP		
Lua		
MATLAB		
OCaml		
Objective-C		

Worked with in PAST year	Want to work with NEXT year
	Worked with in PAST year

	Worked with in PAST year	Want to work with NEXT year
Other (please specify):		
the past year, and which d	ments have you done extensive lo you want to work in over the rand want to continue to do so, p	next year? (If you both
	Worked with in PAST year	Want to work with NEXT year
Cassandra		
Couchbase		

CouchDB

Cloud Firestore

DynamoDB

Elasticsearch

	Worked with in PAST year	Want to work with NEXT year
IBM DB2		
MariaDB		
Microsoft SQL Server		
MongoDB		
MySQL		
Neo4j		
Oracle		
PostgreSQL		
Firebase Realtime Database		
Redis		
SQLite		
Other (please specify):		

Which **cloud platforms** have you done extensive development work in over the past year, and which do you want to work in over the next year? (If you both worked with the platform and want to continue to do so, please check both boxes in that row.)

	Worked with in PAST year	Want to work with NEXT year
AWS		
Colocation		
DigitalOcean		
Firebase		
Google Cloud		
Heroku		
IBM Cloud or Watson		
Linode		
Managed Hosting		
Microsoft Azure		
Oracle Cloud Infrastructure		

	Worked with in PAST year	Want to work with NEXT year
OpenStack		
OVH		
VMware		
Other (please specify):		
development work in over th	d web technologies have you e past year, and which do you ed with the framework and wathat row.)	u want to work in over the
	Worked with in PAST year	Want to work with NEXT year
Angular		
Angular.js		
ASP.NET		П

	Worked with in PAST year	Want to work with NEXT year
ASP.NET Core		
Blazor		
Deno		
Django		
Drupal		
Express		
FastAPI		
Fastify		
Flask		
Gatsby		
jQuery		
Laravel		
Next.js		
Node.js		

	Worked with in PAST year	Want to work with NEXT year
Nuxt.js		
Phoenix		
Play Framework		
React.js		
Ruby on Rails		
Svelte		
Symfony		
Vue.js		
Other (please specify):		

Which **other frameworks and libraries** have you done extensive development work in over the past year, and which do you want to work in over the next year? (If you both worked with the framework and want to continue to do so, please check both boxes in that row.)

	Worked with in PAST year	Want to work with NEXT year
.NET		
Apache Kafka		
Apache Spark		
Capacitor		
Cordova		
Electron		
Flutter		
GTK		
Hadoop		
Ionic		
Keras		
NumPy		
Pandas		
Qt		

	Worked with in PAST year	Want to work with NEXT year
React Native		
Scikit-learn		
Spring		
Tidyverse		
TensorFlow		
Torch/PyTorch		
Hugging Face Transformers		
Uno Platform		
Xamarin		
Other (please specify):		

Which **developer tools** have you done extensive development work in over the past year, and which do you want to work in over the next year? (If you both worked with

the technology and want to continue to do so, please check both boxes in that row.)

	Worked with in PAST year	Want to work with NEXT year
Ansible		
Chef		
Docker		
Flow		
Homebrew		
Kubernetes		
npm		
Pulumi		
Puppet		
Terraform		
Unity 3D		
Unreal Engine		
Yarn		

	Worked with in PAST year	Want to work with NEXT year
Other (please specify):		
	vironments did you use regularly rk with over the next year? Pleas	e check all that apply.
	Worked with in PAST year	Want to work with NEXT year
Android Studio		
Atom		
CLion		
Eclipse		
Emacs		
GoLand		
IntelliJ		
IPython/Jupyter	П	П

	Worked with in PAST year	Want to work with NEXT year
Nano		
NetBeans		
Neovim		
Notepad++		
PhpStorm		
PyCharm		
Qt Creator		
RAD Studio (Delphi, C++ Builder)		
Rider		
RStudio		
RubyMine		
Spyder		
Sublime Text		
TextMate		

	Worked with in PAST year	Want to work with NEXT year
Vim		
Visual Studio		
Visual Studio Code		
Webstorm		
Xcode		
Other (please specify): What is the primary operating s	Cyctom in which you wor	L2 *
what is the phinary operating s	system in which you won	N:
	Personal use	Professional use
BSD		
Linux-based		
macOS		

	Personal use	Professional use
Windows		
Windows Subsystem for Linux (WSL)		
Other (please specify):		
What are the primary version cont	r ol systems you use'	? Select all that apply.
Git		
Mercurial		
SVN		
I don't use one		
Other (pleas	e specify):	

How do you interact with your version control system? Select all that apply.

Version control hosting service	web GUI	
Dedicated version control GUI a	application	
What varaion central heating	porvios ere veu ueina?	
What version control hosting	service are you using?	
	Personal use	Professional use
AWS CodeCommit		
Azure Repos		
Bitbucket		
Cloud Source Repositories		
GitHub		
GitLab		
Custom built solution		

Command-line

Code editor

	Personal use	Professional use
Other (please specify):		
	management tools did you unt to work with over the next year	
A	Worked Will III 7 AST year	want to work with NEXT year
Adobe Workfront		
Airtable		
Asana		
Cerri		
ClickUp		
Confluence		
DingTalk (Teambition)		
Jira Work Management	П	П

	Worked with in PAST year	Want to work with NEXT year
Leankor		
Microsoft Planner		
Microsoft Lists		
monday.com		
Notion		
Planview Projectplace or Clarizen		
Stack Overflow for Teams		
Smartsheet		
Swit		
Trello		
Wimi		
Workzone		
Wrike		

	Worked with in PAST year	Want to work with NEXT year
Other (Please separate with a comma):		
	l s did you use regularly over the next year? Select all that a	•
	Worked with in PAST year	Want to work with NEXT year
Cisco Webex Teams		
Coolfire Core		
Google Chat		П

Mattermost

RingCentral

Rocketchat

Microsoft Teams

	Worked with in PAST year	Want to work with NEXT year
Slack		
Symphony		
Unify Circuit		
Wickr		
Wire		
Zoom		
Other (Please separate with a comma):		
How favorable are you about	blockchain, crypto, and dec	entralization?

0	Very favorable
0	Favorable
0	Indifferent
\bigcirc	Unfavorable

Very unfavorableUnsure
4 - Stack Community
Stack Overflow - usage and community
This section will focus on Stack Overflow usage and community questions.
Most questions in this section are optional. Required questions are noted with *.
Which of the following Stack Overflow sites have you visited? Select all that apply.
Collectives on Stack Overflow
Stack Overflow for Teams (private knowledge sharing & collaboration platform for companies)
Stack Overflow

Stack Exchange
☐ I have never visited Stack Overflow or the Stack Exchange network
How frequently would you say you visit Stack Overflow?
Less than once per month or monthly
A few times per month or weekly
A few times per week
Daily or almost daily
Multiple times per day
Do you have a Stack Overflow account?
☐ Yes
□ No
Not sure/can't remember

How frequently would you say you participate in Q&A on Stack Overflow? By
participate we mean ask, answer, vote for, or comment on questions.
] I have never participated in Q&A on Stack Overflow
Less than once per month or monthly
A few times per month or weekly
A few times per week
Daily or almost daily
Multiple times per day
Do you consider yourself a member of the Stack Overflow community?
No, not at all
No, not really
] Neutral
] Yes, somewhat
Yes, definitely
] Not sure

Demographics

Demographics

All questions in this section are optional, you may leave questions blank if you prefer not to answer.

As a reminder, all reporting of the survey responses will be anonymized.

vvnat is your age?						
Under 18 years old						
18-24 years old						
25-34 years old						
35-44 years old						
45-54 years old						
55-64 years old						

65 years or older

\\/\- = \ != = = = 0

Prefer not to say
Which of the following describe you, if any? Please check all that apply.
☐ Woman
☐ Man
Non-binary, genderqueer, or gender non-conforming
Prefer not to say
Or, in your own words:
Do you identify as transgender?
☐ Yes
□ No
☐ Prefer not to say
Or, in your own words:

Which of the following describe you, if any? Please check all that apply.
Bisexual
Gay or Lesbian
Straight / Heterosexual
Queer
Prefer not to say
Prefer to self-describe:
Which of the following describe you, if any? Please check all that apply.
African
Asian
Black
Caribbean
Central American
Central Asian

East Asian
European
Hispanic or Latino/a
Indian
Indigenous (such as Native American or Indigenous Australian)
Middle Eastern
North African
North American
Pacific Islander
South American
South Asian
Southeast Asian
White
Ethnoreligious group
Biracial
Multiracial
I don't know
Prefer not to say

-6

Or, in your own words:
Which of the following describe you, if any? Please check all that apply.
☐ I am blind / have difficulty seeing
I am deaf / hard of hearing
I am unable to / find it difficult to type
☐ I am unable to / find it difficult to walk or stand without assistance
■ None of the above
Prefer not to say
Or, in your own words:
Which of the following describe you, if any? Please check all that apply.
☐ I have a concentration and/or memory disorder (e.g., ADHD, etc.)
☐ I have a mood or emotional disorder (e.g., depression, bipolar disorder, etc.)

None of the above	
Prefer not to say	
Or, in your own words:	
TeamsBranch	
Professional Developer Series	
In one of our previous pulse surveys, we saw that people valued being productive and having growth opportunities at work*. By adding a Professional Developer Series to this year's survey we want to better understand the things that may impact your productivity and opportunities to learn.	

Like the rest of the survey, your responses are completely anonymous.

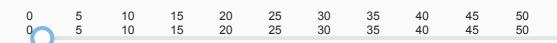
I have autism / an autism spectrum disorder (e.g. Asperger's, etc.)

I have learning differences (e.g., Dyslexic, Dyslexia, etc.)

I have an anxiety disorder

Blog post - New data: What developers look for in future job opportunities - December 7, 2021
Would you like to participate in the Professional Developer Series?
) Yes
) No
TeamsQuestions
Are you an independent contributor or people manager?
) Independent contributor
) People manager

How many years of working experience do you have?



Years of work experience

Please rate your level of agreement with the following statement:

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
I have interactions with people outside of my immediate team.	0	0	0	0	0
Knowledge silos prevent me from getting ideas across the organization (i.e., one individual or team has information that isn't shared with others)	0	0	0	0	0
I can find up-to-date information within my organization to help me do my job.	0	0	0	0	0
I am able to quickly find answers to my questions with existing tools and resources.	0	0	0	0	0
I know which system or resource to use to find information and answers to questions I have.	0	0	0	0	0

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
I often find myself answering questions that I've already answered before.	0	0	0	0	0
Waiting on answers to questions often causes interruptions and disrupts my workflow.	0	0	0	0	0

How frequently do you experience each of the following?

Needing help from people outside of your immediate team?	~
Interacting with people outside of your immediate team?	~
Encountering knowledge silos (where one individual or team has information that's not shared or distributed with other individuals or teams) at work?	•

On an average day, how much time do you typically spend searching for answers or solutions to problems you encounter at work? (This includes time spent searching on your own, asking a colleague, and waiting for a response).

Less than 15 minutes a day
15-30 minutes a day
O 30-60 minutes a day
O 60-120 minutes a day
Over 120 minutes a day
On an average day, how much time do you typically spend answering questions you
get asked at work?
C Less than 15 minutes a day
15-30 minutes a day
30-60 minutes a day
O 60-120 minutes a day
Over 120 minutes a day
The time it takes to onboard new hires at my company is:
Very longSomewhat long

Just right
O Somewhat short
O Very short
My company has:
☐ Innersource initiative
□ DevOps function
☐ Microservices
☐ Developer portal or other central places to find tools/services
Continuous integration (CI) and (more often) continuous delivery
Automated testing
Observability tools
None of these
Does your team use Stack Overflow for Teams?
O Yes
○ No

140, but we want to use it		
Last few questions		
	Yes	No
Are you involved in supporting new hires during their onboarding?	0	0

FinalThoughtsSurveyReview

Do you use learning resources provided by your employer?

Does your employer give you time to learn new skills?

Final Questions

How do you feel about the length of the survey this year?

Too short
Appropriate in length
☐ Too long
How easy or difficult was this survey to complete?
Easy
☐ Neither easy nor difficult
☐ Difficult
Powered by Qualtrics