

Welcome

Hello world!

Thank you for taking the 2024 Stack Overflow Developer Survey, the longest running survey of software developers (and anyone else who codes!) on Earth.

There are seven sections in this survey. The 2nd, 3rd, 4th, and 5th 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. Artificial Intelligence
- 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 15 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.

Consent Statement

You consent to providing your information to help us stay privacy compliant

Your participation in this survey is completely anonymous. 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. The information gathered via this survey is made available to the public in the spirit of community which Stack Overflow was founded and to serve as a resource for everyone who codes.

By selecting "I agree" and submitting this survey, you acknowledge that you voluntarily consent to your anonymous answers being made publicly available.

I agreeI do not agree (selecting this will end the survey)

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? For the purpose of this survey, a developer is "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/studies I used to be a developer by profession, but no longer am I am learning to code I code primarily as a hobby None of these What 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 Prefer not to say **Employment** Which of the following best describes your current employment status? Select all that apply.* Employed, full-time

Employed, part-time

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| Independent contractor, freelancer, or self-e | employed |
| ■ Not employed, but looking for work | |
| ■ Not employed, and not looking for work | |
| Student, full-time | |
| Student, part-time | |
| Retired | |
| ☐ I prefer not to say | |
| | |
| Which best describes your current work | situation? |
| | |
| Remote | |
| In-person | |
| Hybrid (some remote, some in-person) | |
| | |
| Just checking to make sure you are pay | ing attention to the survey questions. |
| Select 'Apples' from the list and you can | |
| | |
| ○ Learning | |
| C Writing gods | |
| Writing code | |
| O Apples | |
| Deployment | |
| Other: | |
| | |
| | |
| Which of the following best describes the | e code you write outside of work? Select all |
| that apply. | , |
| | |
| Hobby | |
| Freelance/contract work | |
| Contribute to open-source projects | |
| ☐ Bootstrapping a business | |
| ☐ School or academic work | |

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| Professional development or self-pa | aced learning from online courses |
| ☐ I don't code outside of work | |
| Other (ple | ase specify): |
| | |
| | |
| | |
| 2 - Education + Work + Career | |
| | |
| | |
| Education, work, and care | er |
| | |
| This section will focus on your education | n, work, and career. |
| | |
| Most questions in this section are optio | nal. Required questions are noted with *. |
| | |
| | |
| Which of the following best descr | ribes the highest level of formal education that |
| you've completed? * | |
| | |
| Primary/elementary school | |
| Secondary school (e.g. American h | igh school, German Realschule or Gymnasium, etc.) |
| Some college/university study without | out earning a degree |
| Associate degree (A.A., A.S., etc.) | |
| Bachelor's degree (B.A., B.S., B.En | ıg., etc.) |
| Master's degree (M.A., M.S., M.Eng | g., MBA, etc.) |
| O Professional degree (JD, MD, Ph.D | , Ed.D, etc.) |
| O Something else | |
| | |
| | |
| How do you learn to code? Selec | t all that apply. |
| Books / Physical media | |
| Coding Bootcamp | |
| Colleague | |
| | |
| Friend or family member | |
| Online Courses or Certification | |

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| | On the job training | |
| | Other online resources (e.g., videos, blogs, forum, online community) | |
| | School (i.e., University, College, etc) | |
| Ш | Other (please specify): | |
| | | |
| | | |
| ' | What online resources do you use to learn to code? Select all that apply. | |
| | Stack Overflow | |
| | Blogs | |
| | Online community (including social media) | |
| | Video-based online courses | |
| | Online challenges (e.g., daily or weekly coding challenges) | |
| | Coding sessions (live or recorded) | |
| | Written-based online courses | |
| | How-to videos | |
| | Auditory material (e.g., podcasts) | |
| | Technical documentation | |
| | Certification videos | |
| | Books | |
| | Games that teach programming | |
| | Al chatbot or other tool | |
| | Written tutorials | |
| | Interactive tutorial | |
| | Other (please specify): | |
| | | |
| | | |
| | | |
| ' | What is the source of the technical documentation you use most often to learn | to |
| (| code? Select all that apply. | |
| | API document(s) and/or SDK document(s) | |
| | User guides or README files found in the source repository | |
| | First-party knowledge base | |
| | Traditional public search engine | |

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|------------|--|--|
| 0 |) Developer, game or graphics | |
| 0 |) Developer, mobile | |
| 0 |) Developer, QA or test | |
| 0 |) DevOps specialist | |
| 0 |) Educator | |
| 0 |) Engineer, site reliability | |
| 0 |) Engineering manager | |
| 0 |) Hardware Engineer | |
| Ō |) Marketing or sales professional | |
| Ŏ |) Product manager | |
| Ö |) Project manager | |
| Ō |) Research & Development role | |
| Ŏ |) Scientist | |
| Ö |) Senior Executive (C-Suite, VP, etc.) | |
| Ö |) Student | |
| Ö |) System administrator | |
| Ŏ |) Security professional | |
| Ō | Other (please specify) | |
| | | |
| | | |
| | | |
| A | Approximately how many people are employ | red by the company or organization you |
| C | currently work for? This should only include | your primary company, and not the |
| ϵ | entire holding or parent company if that appl | ies. |
| | | |
| \bigcirc |) Just me - I am a freelancer, sole proprietor, etc. | |
| \bigcirc | 2 to 9 employees | |
| \circ | 10 to 19 employees | |
| \circ | 20 to 99 employees | |
| O |) 100 to 499 employees | |
| Ō |) 500 to 999 employees | |
| Ō |) 1,000 to 4,999 employees | |
| Ō |) 5,000 to 9,999 employees | |
| 0 |) 10,000 or more employees | |
| \bigcirc |) I don't know | |

| What level of influence do you, personally, have over new technology purchases at your organization? |
|--|
| I have little or no influence I have some influence I have a great deal of influence |
| When buying a new tool or software, how do you discover and research available solutions? Select all that apply. |
| Start a free trial Ask developers I know/work with Ask a generative AI tool Visit developer communities like Stack Overflow Read ratings or reviews on third party sites like G2 Crowd Research companies that have advertised on sites I visit Research companies that have emailed me Other (please specify): |
| When asked to provide a recommendation for solving a problem at work with a new tool or software, what has been your most recent choice of the following? |
| Out-of-the-box is ready to go with little need for customization Is ready-to-go but also customizable for growth and targeted use cases Is set up to be customized and needs to be engineered into a usable product |
| What product feature do you care about most when endorsing a technology purchase? Select all that apply. |
| ☐ APIs ☐ Customization |

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| Integrated developer community | |
| Connected to an open source project | |
| Quality support system | |
| Al tool integration | |
| Reputation for quality and excellence | |
| Frequent updates to features | |
| Other: | |
| Where do you live? * | |
| | V |
| | |
| Which currency do you use day-to-day? the one you're most comfortable estima | ? If your answer is complicated, please pick ting in. * |
| What is your current total annual complete before taxes and deductions)? Please without any punctuation. If you are paid yearly salary. If you prefer not to answer | enter a whole number in the box below, hourly, please estimate an equivalent |
| | |
| | |
| | |

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 |
|-------------------------|--------------------------|-----------------------------|
| Ada | | |
| Apex | | |
| Assembly | | |
| Bash/Shell (all shells) | | |
| С | | |
| C# | | |
| C++ | | |
| Clojure | | |
| Cobol | | |
| Crystal | | |
| Dart | | |
| Delphi | | |
| Elixir | | |
| Erlang | | |
| F# | | |
| Fortran | | |
| GDScript | | |
| Go | | |
| Groovy | | |
| Haskell | | |

| | Worked with in PAST year | Want to work with NEXT year |
|---------------------|--------------------------|-----------------------------|
| HTML/CSS | | |
| Java | | |
| JavaScript | | |
| Julia | | |
| Kotlin | | |
| Lisp | | |
| Lua | | |
| MATLAB | | |
| MicroPython | | |
| Nim | | |
| Objective-C | | |
| OCaml | | |
| Perl | | |
| PHP | | |
| PowerShell | | |
| Prolog | | |
| Python | | |
| R | | |
| Ruby | | |
| Rust | | |
| Scala | | |
| Solidity | | |
| SQL | | |
| Swift | | |
| TypeScript | | |
| VBA | | |
| Visual Basic (Net) | | |

| | Worked with in PAST year | Want to work with NEXT year |
|------------------------------|---|-----------------------------|
| Zephyr | | |
| Zig | | |
| Other (please specify): | | |
| over the past year, and whic | ents have you done extensich do you want to work in ovase and want to continue to | er the next year? (If you |
| | Worked with in PAST year | Want to work with NEXT year |
| BigQuery | | |
| Cassandra | | |
| Clickhouse | | |
| Cloud Firestore | | |
| Cockroachdb | | |
| Cosmos DB | | |
| Couch DB | | |
| Couchbase | | |
| Databricks SQL | | |
| Datomic | | |
| DuckDB | | |
| Dynamodb | | |
| Elasticsearch | | |
| EventStoreDB | | |
| Firebase Realtime Database | | |
| Firebird | \Box | _ _ |

| | Worked with in PAST year | Want to work with NEXT year |
|-------------------------|--------------------------|-----------------------------|
| H2 | | |
| IBM DB2 | | |
| InfluxDB | | |
| MariaDB | | |
| Microsoft Access | | |
| Microsoft SQL Server | | |
| MongoDB | | |
| MySQL | | |
| Neo4J | | |
| Oracle | | |
| PostgreSQL | | |
| Presto | | |
| RavenDB | | |
| Redis | | |
| Snowflake | | |
| Solr | | |
| SQLite | | |
| Supabase | | |
| TiDB | | |
| 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 |
|-----------------------------------|--------------------------|-----------------------------|
| Alibaba Cloud | | |
| Amazon Web Services (AWS) | | |
| Cloudflare | | |
| Colocation | | |
| Databricks | | |
| Digital Ocean | | |
| Firebase | | |
| Fly.io | | |
| Google Cloud | | |
| Heroku | | |
| Hetzner | | |
| IBM Cloud Or Watson | | |
| Linode | | |
| Managed Hosting | | |
| Microsoft Azure | | |
| Netlify | | |
| OpenShift | | |
| OpenStack | | |
| Oracle Cloud Infrastructure (OCI) | | |
| OVH | | |
| PythonAnywhere | | |
| Render | | |
| Scaleway | | |
| Supabase | | |
| Vercel | | |
| VMware | | |
| Vultr | П | П |

jQuery

| | Worked with in PAST year | Want to work with NEXT year |
|-------------------------|---|-----------------------------|
| Other (please specify): | | |
| development work in ove | and web technologies have yer the past year, and which do yearked with the framework and we in that row.) | ou want to work in over the |
| | Worked with in PAST year | Want to work with NEXT year |
| Angular | | |
| AngularJS | | |
| ASP.NET | | |
| ASP.NET CORE | | |
| Astro | | |
| Blazor | | |
| Codelgniter | | |
| Deno | | |
| Django | | |
| Drupal | | |
| Elm | | |
| Express | | |
| FastAPI | | |
| Fastify | | |
| Flask | | |
| Gatsby | | |
| Htmx | | П |

| | Worked with in PAST year | Want to work with NEXT year |
|-------------------------|--------------------------|-----------------------------|
| Laravel | | |
| NestJS | | |
| Next.js | | |
| Node.js | | |
| Nuxt.js | | |
| Phoenix | | |
| Play Framework | | |
| React | | |
| Remix | | |
| Ruby on Rails | | |
| Solid.js | | |
| Spring Boot | | |
| Strapi | | |
| Svelte | | |
| Symfony | | |
| Vue.js | | |
| WordPress | | |
| Yii 2 | | |
| Other (please specify): | | |

Which **embedded systems and technologies** 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 |
|-------------------------|--------------------------|-----------------------------|
| Arduino | | |
| Boost.Test | | |
| build2 | | |
| Catch2 | | |
| CMake | | |
| Cargo | | |
| cppunit | | |
| CUTE | | |
| doctest | | |
| GNU GCC | | |
| LLVM's Clang | | |
| Meson | | |
| Micronaut | | |
| MSVC | | |
| Ninja | | |
| PlatformIO | | |
| QMake | | |
| Rasberry Pi | | |
| SCons | | |
| ZMK | | |
| 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 (5+) | | |
| .NET Framework (1.0 - 4.8) | | |
| .NET MAUI | | |
| Apache Kafka | | |
| Apache Spark | | |
| Capacitor | | |
| Cordova | | |
| CUDA | | |
| DirectX | | |
| Electron | | |
| Flutter | | |
| GTK | | |
| Hadoop | | |
| Hugging Face Transformers | | |
| Ionic | | |
| JAX | | |
| Keras | | |
| Ktor | | |
| MFC | | |
| mlflow | | |
| Numpy | | |
| OpenCL | | |
| Opencv | | |
| OpenGL | | |

| | Worked with in PAST year | Want to work with NEXT year |
|---|--|-----------------------------|
| Pandas | | |
| Qt | | |
| Quarkus | | |
| RabbitMQ | | |
| React Native | | |
| Roslyn | | |
| Ruff | | |
| Scikit-Learn | | |
| Spring Framework | | |
| SwiftUI | | |
| Tauri | | |
| TensorFlow | | |
| Tidyverse | | |
| Torch/PyTorch | | |
| Xamarin | | |
| Other (please specify): | | |
| Which developer tools for co extensive development work in over the next year? (If you be to do so, please check both be | n over the past year, and booth worked with the tech | which do you want to work |
| | Worked with in PAST year | Want to work with NEXT year |
| Ansible | | |
| Ant | | |
| APT | П | П |

| | Worked with in PAST year | Want to work with NEXT year |
|--------------------|--------------------------|-----------------------------|
| Bun | | |
| Chef | | |
| Chocolatey | | |
| Composer | | |
| Dagger | | |
| Docker | | |
| Godot | | |
| Google Test | | |
| Gradle | | |
| Homebrew | | |
| Kubernetes | | |
| Make | | |
| Maven (build tool) | | |
| MSBuild | | |
| Ninja | | |
| Nix | | |
| npm | | |
| NuGet | | |
| Pacman | | |
| Pip | | |
| pnpm | | |
| Podman | | |
| Pulumi | | |
| Puppet | | |
| Terraform | | |
| Unity 3D | | |
| Unreal Engine | | |

| | Worked with in PAST year | Want to work with NEXT year |
|-----------------------------|---|-----------------------------|
| Visual Studio Solution | | |
| Vite | | |
| Webpack | | |
| Yarn | | |
| Other (please specify): | | |
| | | |
| | | |
| | onments did you use regular with over the next year? Plea | |
| | Worked with in PAST year | Want to work with NEXT year |
| Android Studio | | |
| BBEdit | | |
| CLion | | |
| Code::Blocks | | |
| DataGrip | | |
| Eclipse | | |
| Emacs | | |
| Fleet | | |
| Geany | | |
| Goland | | |
| Helix | | |
| IntelliJ IDEA | | |
| IPython | | |
| Jupyter Notebook/JupyterLab | | |
| Kate | | |
| Nano | П | П |

| | Worked with in PAST year | Want to work with NEXT year |
|--------------------------------------|--------------------------|-----------------------------|
| Neovim | | |
| Netbeans | | |
| Notepad++ | | |
| PhpStorm | | |
| PyCharm | | |
| Qt Creator | | |
| Rad Studio (Delphi, C++ Builder) | | |
| Rider | | |
| RStudio | | |
| RubyMine | | |
| Spacemacs | | |
| Spyder | | |
| Sublime Text | | |
| Vim | | |
| Visual Studio | | |
| Visual Studio Code | | |
| VSCodium | | |
| WebStorm | | |
| Xcode | | |
| Other (please specify): | | |
| | | |
| | | |
| What is the primary operating | g system in which you wo | rk? |
| | Personal use | Professional use |
| AIX | | |
| Android | | |

| | Personal use | Professional use |
|--|--------------------------|-----------------------------|
| Arch | | |
| BSD | | |
| ChromeOS | | |
| Cygwin | | |
| Debian | | |
| Fedora | | |
| Haiku | | |
| iOS | | |
| iPadOS | | |
| MacOS | | |
| Other Linux-based | | |
| Red Hat | | |
| Solaris | | |
| Ubuntu | | |
| Windows | | |
| Windows Subsystem for Linux (WSL) | | |
| Other (please specify): | | |
| Which collaborative work manyou use regularly over the past next year? Select all that apply | year, and which do you | |
| | Worked with in PAST year | Want to work with NEXT year |
| Airtable | | |
| Asana | | |
| Azure Devons | | |

| | Worked with in PAST year | Want to work with NEXT year |
|--------------------------|--------------------------|-----------------------------|
| Basecamp | | |
| Clickup | | |
| Confluence | | |
| Doxygen | | |
| GitHub Discussions | | |
| Jira | | |
| Linear | | |
| Lucid | | |
| Markdown File | | |
| Microsoft Lists | | |
| Microsoft Planner | | |
| Miro | | |
| Monday.com | | |
| Notion | | |
| Obsidian | | |
| Redmine | | |
| Shortcut | | |
| Smartsheet | | |
| Stack Overflow for Teams | | |
| Trello | | |
| Wikis | | |
| YouTrack | | |
| Other (please specify): | <u>.</u> | |
| | | |

Which **communication tools** did you use regularly over the past year, and which do you want to work with over the next year? Select all that apply

| | Worked with in PAST year | Want to work with NEXT year |
|-------------------|--------------------------|-----------------------------|
| Cisco Webex Teams | | |
| Coolfire Core | | |
| Discord | | |
| Google Chat | | |
| Google Meet | | |
| IRC | | |
| Jitsi | | |
| Matrix | | |
| Mattermost | | |
| Microsoft Teams | | |
| Ringcentral | | |
| Rocketchat | | |
| Signal | | |
| Skype | | |
| Slack | | |
| Symphony | | |
| Telegram | | |
| Unify Circuit | | |
| Whatsapp | | |
| Wickr | | |
| Wire | | |
| Zoom | | |
| Zulip | | |

Worked with in PAST year

Want to work with NEXT year

| Other (please specify): | | |
|-------------------------|--|-----------------------------|
| | ch and developer tools did yo you want to work with over the | |
| | Worked with in PAST year | Want to work with NEXT year |
| Andi | | |
| AskCodi | | |
| Amazon Q | | |
| Bing Al | | |
| ChatGPT | | |
| Claude | | |
| Codeium | | |
| Cody | | |
| GitHub Copilot | | |
| Google Gemini | | |
| Lightning Al | | |
| Meta AI | | |
| Metaphor | | |
| Neeva Al | | |
| OpenAl Codex | | |
| Perplexity Al | | |
| Phind | | |
| Quora Poe | | |
| Replit Ghostwriter | | |

| | Worked with in PAST year | Want to work with NEXT year | |
|---|---------------------------------|---------------------------------|--|
| WolframAlpha | | | |
| Snyk Code | | | |
| Tabnine | | | |
| Visual Studio Intellicode | | | |
| Whispr Al | | | |
| You.com | | | |
| Other (please specify): | | | |
| 4 - Stack Community Stack Overflow - usage and community | | | |
| This section will focus on Stack Ove | rflow usage and community qu | uestions. | |
| Most questions in this section are or | otional. Required questions are | e noted with *. | |
| Which of the following Stack C | overflow sites have you vis | sited? Select all that apply. * | |
| I have never visited Stack Overfloor | ow or the Stack Exchange n | etwork | |
| Stack Overflow Blog or Podcast | | | |
| Overflow API | | banatian mlatfama far | |
| Stack Overflow for Teams (privat companies) | e knowledge snaring & colla | boration platform for | |
| Stack Overflow | | | |
| Stack Exchange | | | |

| ŀ | How frequently would you say you visit Stack Overflow? |
|--------|--|
| 00000 | 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? |
| 000 | 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. |
| 000000 | 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 |
| ŀ | How do you use Stack Overflow? Select all that apply. |
| | Quickly finding code solutions Finding reliable guidance from community-vetted answers Learning new-to-me technology/techniques Learning new-to-everyone technology/techniques Showcase expertise with code solutions Engage with community by commenting on questions and answers or voting on |
| Ш | Engage with community by commenting on questions and answers or voting on questions and answers |

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|--------------|---|
| | Other (please specify): |
| | |
| | |
| | |
| Do | you consider yourself a member of the Stack Overflow community? |
| \bigcirc N | lo, not at all |
| \bigcirc N | lo, not really |
| _ | leutral |
| _ | es, somewhat |
| _ | es, definitely |
| • | lot sure |
| O N | iot sui e |
| | |
| Th | inking about your personal experience using Stack Overflow, what could we |
| | ange/improve to make it better for you? |
| Cite | ange/improve to make it better for you: |
| | |
| | |
| | |
| | |
| 5 - | Artificial Intelligence |
| | |
| _ | |
| Ar | tificial Intelligence (AI) |
| | |
| Thi | s section will focus on Al usage and sentiment. |
| | |
| Мо | st questions in this section are optional. Required questions are noted with *. |
| | |
| | |
| D - | value our month, use Al to ale in value develor months and the second |
| טט | you currently use AI tools in your development process? * |
| (Y | es |
| _ | lo, but I plan to soon |
| _ | lo, and I don't plan to |
| \cup ' | |

| | How favorable is your stance on using AI tools as part of your development workflow? |
|--------|---|
| 000000 | Very favorable Favorable Indifferent Unfavorable Very unfavorable Unsure |
| | For the AI tools you use as part of your development workflow, what are the MOST important benefits you are hoping to achieve? Please check all that apply. |
| | Increase productivity Greater efficiency Make workload more manageable Improve collaboration Speed up learning Improve accuracy in coding None of the above Other (please specify): |
| | How much do you trust the accuracy of the output from AI tools as part of your development workflow? |
| 00000 | Highly trust Somewhat trust Neither trust nor distrust Somewhat distrust Highly distrust |

| t | asks? |
|------------|---|
| 0 | Very well at handling complex tasks |
| 0 | Good, but not great at handling complex tasks |
| 0 | Neither good or bad at handling complex tasks |
| 0 | Bad at handling complex tasks |
| \bigcirc | Very poor at handling complex tasks |

How well do the AI tools you use in your development workflow handle complex

Which parts of your development workflow are you currently using AI tools for and which are you interested in using AI tools for over the next year? Please select all that apply.

| | Currently Using | Interested in Using | Not interested in Using |
|--------------------------------------|-----------------|---------------------|----------------------------|
| Learning about a codebase | 0 | \circ | 0 |
| Project planning | 0 | \circ | 0 |
| Writing code | 0 | 0 | 0 |
| Documenting code | \circ | \circ | 0 |
| Debugging and getting help | \circ | 0 | 0 |
| Testing code | \circ | 0 | 0 |
| Committing and reviewing code | \circ | \circ | 0 |
| Deployment and monitoring | \circ | \circ | 0 |
| Predictive analytics | \circ | \circ | 0 |
| Search for answers | 0 | 0 | 0 |
| Generating content or synthetic data | 0 | 0 | 0 |
| Other (please specify): | 0 | 0 | 0 |

Yes

Thinking about how your job and process changes over time, how integrated in your workflow do you anticipate AI tools you are currently using will be 1 year from now?

| | Much less | Less | | More | Much more |
|--|-------------|------------|-----------|------------|------------|
| | integrated | integrated | No change | integrated | integrated |
| » Learning about a codebase | \circ | \circ | \circ | \circ | \circ |
| » Project planning | 0 | \circ | \circ | \circ | 0 |
| » Writing code | 0 | \circ | 0 | 0 | 0 |
| » Documenting code | 0 | \circ | 0 | 0 | 0 |
| » Debugging and getting help | 0 | \circ | 0 | 0 | 0 |
| » Testing code | 0 | 0 | 0 | 0 | 0 |
| » Committing and reviewing code | 0 | 0 | 0 | 0 | 0 |
| » Deployment and monitoring | 0 | 0 | 0 | 0 | 0 |
| » Predictive analytics | \circ | 0 | 0 | 0 | 0 |
| » Search for answers | 0 | 0 | 0 | 0 | 0 |
| Senerating content or synthetic data | 0 | 0 | 0 | 0 | 0 |
| » Other (please specify): | 0 | 0 | 0 | 0 | 0 |
| Please describe how you would expect your workflow to be different, if at all, in 1 year as a result of Al advancements. | | | | | |
| | | | | | |
| Do you believe Al is a threat | to your cur | rent job? | | | |

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|-------------------|---|--|
| 0 | No | |
| 0 | I'm not sure | |
| ١ | Vhich AI ethical responsibili | ties are most important to you? Select all that apply. |
| | Biased results that do not repr | esent diverse viewpoints |
| $\overline{\Box}$ | Circulating misinformation or o | disinformation |
| $\overline{\Box}$ | Imitating a person's likeness | |
| $\overline{\Box}$ | | s for new employment opportunities |
| $\overline{\Box}$ | Energy demand | |
| | Missing or incorrect attribution | for sources of data |
| | Othe | er (please specify): |
| | What are the challenges to year. SenAl tools? Select all that | your company/whole team using AI code assistants or apply. |
| | Don't trust the output or answer | ers |
| | Al tools lack context of codeba | ase, internal architecture, and/or company knowledge |
| | They create more work (more | code/PRs to review, etc.) |
| | We don't have the right policie | es in place to reduce security risks |
| | Not everyone uses them | |
| | Lack of executive buy-in | |
| | Lack of proper training and ed | ucation on new tools |
| | None of the above | |
| | Othe | er (please specify): |

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 the 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. Most questions in this section are optional. Required questions are noted with *.

Blog post - <u>Hopping instead of hustling: Survey tells us how developers are taking care of business</u> - October 26, 2023

| | Would you like to participate in the Professional Developer Series? * |
|-----------|---|
| \subset |) Yes |
| |) No |

TeamsQuestions

Are you an individual contributor or people manager?

Individual contributor

People manager

How many years of working experience do you have?

5 10 15 20 25 30 35 40 45 50

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 |
| 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 |
| I feel like I have the tools and/or resources to quickly understand and work on any area of my company's code/system/platform. | 0 | 0 | 0 | 0 | 0 |
| I have asked my employer to reimburse me for tools or a product that helps me do my job better or faster | 0 | 0 | 0 | 0 | 0 |
| How frequently do you experience each of the following? | | | | | |
| Needing help from people outside of your immediate team | n? | | | | ~ |
| Interacting with people outside of your immediate team? | | | | | ~ |
| Encountering knowledge silos (where one individual or teashared or distributed with other individuals or teams) at we | | mation that's | not | | V |
| | | | | | |

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

| /7/24,9:43 AM 15-30 minutes a day 30-60 minutes a day 60-120 minutes a day Over 120 minutes a day | Qualtrics Survey Software |
|--|--|
| On an average day, how much you get asked at work? | h time do you typically spend answering questions |
| Less than 15 minutes a day 15-30 minutes a day 30-60 minutes a day 60-120 minutes a day Over 120 minutes a day | |
| Which of these company chall that apply. | lenges causes you the most frustration? Select all |
| Complexity of tech stack for build Complexity of tech stack for dep Amount of technical debt Number of software tools in use Patching/updating core componed Maintaining security of code bein Maintaining security of systems/ Reliability of tools/systems used Tracking my work Showing my contributions None of these | ents ng produced /platforms used in work |
| My company has: | |
| ☐ Innersource initiative ☐ Al-assisted technology tool(s) | |

DevOps function

 $https://stackoverflow.az1.qualtrics.com/Q/EditSection/Blocks/Ajax/GetSurveyPrintPreview?ContextSurveyID=SV_6rJVT6XXsfTo1JI\&ContextLibraryID=UR_6X...$

Internet, Telecomm or Information Services

| 7/24, | 4, 9:43 AM Qualtrics Survey Software | |
|------------|--|-------------------|
| \bigcirc |) Fintech | |
| \bigcirc |) Energy | |
| \bigcirc | Government | |
| \bigcirc | Banking/Financial Services | |
| C |) Manufacturing | |
| \bigcirc | Transportation, or Supply Chain | |
| \bigcirc | Healthcare | |
| \bigcirc | Retail and Consumer Services | |
| \bigcirc | Higher Education | |
| \bigcirc | Media & Advertising Services | |
| \bigcirc |) Insurance | |
| \bigcirc | Other: | |
| | | |
| | | |
| | | |
| H | How satisfied are you in your current professional developer role? | |
| No | ot at all satisfied Ex | tromoly satisfied |
| | 00 10 20 30 40 50 60 70 80 | tremely satisfied |
| U. | | 90 100 |
| | | |
| A | Assign points to the following attributes of your job according to those the | nat |
| C | contribute the most to your satisfaction out of 100 total points: | |
| | | |
| | Driving strategy for my team | 0 |
| | Contributing to open source | 0 |
| | Convince data and anvincements | 0 |
| | Securing data and environments | |
| | Improving quality of code and developer environments | 0 |
| | Learning and using new technology, including platforms, APIs and libraries | 0 |
| | | |
| | Designing and building environments, databases, and all things architecture | 0 |
| | Being a power user of a tool, developer language or process that others come | 0 |
| | to for answers and guidance about | ـــــــــا |
| | Working with new and/or top-quality hardware | 0 |

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| | A well-staffed/sourced internal network that makes observability easy so network or runtime issues are addressed and fixed easily | 0 |
|-----|---|---|
| | Total | 0 |
| 000 | Does your team use Stack Overflow for Teams? Yes No No, but we want to use it | |
| | FinalThoughtsSurveyReview | |
| | 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 | |

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