

# Stack Overflow Annual Developer Survey 2024

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This dataset is derived from the 2024 Stack Overflow Annual Developer Survey. Conducted in May 2024, the survey gathered responses from over 65,000 developers across seven key sections:

- 1. Basic information
- 2. Education, work, and career
- 3. Tech and tech culture
- 4. Stack Overflow community
- 5. Artificial Intelligence (AI)
- 6. Professional Developer Series - Not part of the main survey
- 7. Thoughts on Survey

The dataset provided for this analysis focuses exclusively on the single-response questions from the main survey sections. Each categorical response in the survey has been integer-coded, with corresponding labels available in the crosswalk file.

What can you see about developer demographics? How do developers engage with Stack Overflow? What do they think about AI?

## Data Source

The data and description may be found on following GitHub repository:

[tidytuesday/data/2024/2024-09-03/readme.md at master · rfordatascience/tidytuesday · GitHub](#)

Three csv files contain all the data used in the study.

- [https://raw.githubusercontent.com/rfordatascience/tidytuesday/master/data/2024/2024-09-03/qname\\_levels\\_single\\_response\\_crosswalk.csv](https://raw.githubusercontent.com/rfordatascience/tidytuesday/master/data/2024/2024-09-03/qname_levels_single_response_crosswalk.csv)
- [https://raw.githubusercontent.com/rfordatascience/tidytuesday/master/data/2024/2024-09-03/stackoverflow\\_survey\\_questions.csv](https://raw.githubusercontent.com/rfordatascience/tidytuesday/master/data/2024/2024-09-03/stackoverflow_survey_questions.csv)
- [https://raw.githubusercontent.com/rfordatascience/tidytuesday/master/data/2024/2024-09-03/stackoverflow\\_survey\\_single\\_response.csv](https://raw.githubusercontent.com/rfordatascience/tidytuesday/master/data/2024/2024-09-03/stackoverflow_survey_single_response.csv)

## Data Dictionary

The data of the survey is divided into three csv files, containing the questions of the survey, the possible answers of each question and the survey results for each survey participant.

### stackoverflow\_survey\_questions.csv

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Contains all questions asked in the survey, with an identification (qname) and the text represented in the survey.

variable	class	description
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variable	class	description
qname	character	Categorical Question/Column Name in main data
question	character	Text of the question as it was presented to the respondent

qname\_levels\_single\_response\_crosswalk.csv

Contains the possible answers of each question in the survey. The questions are referenced by the qname identification.

variable	class	description
qname	character	Categorical Question/Column Name in main data
level	integer	Integer index associated with each column response
label	character	Label associated with integer index

stackoverflow\_survey\_single\_response.csv

Contains a list of all responses of the participants. One row contains all answers of each questions.

variable	class	description
response_id	double	Respondent ID
main_branch	integer	Professional coding level of the respondent
age	integer	Age
remote_work	integer	Current work situation
ed_level	integer	Highest education level completed
years_code	integer	Years the respondent has coded in total; More than 50 years coded as 51
years_code_pro	integer	Years the respondent has coded professionally; More than 50 years coded as 51
dev_type	integer	Best current-job description
org_size	integer	People in the organization
purchase_influence	integer	Level of influence in purchasing new technology at their organization
buildvs_buy	integer	How much customization was needed in most recent tool recommendation
country	character	Country in which the respondent lives

variable	class	description
currency	character	Currency of the country
comp_total	double	Total compensation
so_visit_freq	integer	Stack Overflow visiting frequency
so_account	integer	Stack Overflow account status
so_part_freq	integer	Stack Overflow participation frequency
so_comm	integer	Whether the respondent considers themselves a member of the Stack Overflow community?
ai_select	integer	Use AI in development process
ai_sent	integer	Stance on using AI tools as part of development workflow
ai_acc	integer	Trust in accuracy of AI as part of development workflow
ai_complex	integer	How well the respondent believes the AI tools they use in development workflows handle complex tasks
ai_threat	integer	Belief that AI is a threat to current job
survey_length	integer	Feeling about the length of the Stack Overflow Developer Survey this year
survey_ease	integer	Ease of completion of this survey
converted_comp_yearly	double	Converted compensation
r_used	integer	Flag if respondent used R in the previous year
r_want_to_use	integer	Flag if respondent want to use R in the next year