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Impact of AI tools
on software
development
code quality

Elements of code quality

- Readability
- Maintainability
- Efficiency
- Accuracy
- Traditional methods vs AI influence

Overview of tools discussed in the survey

- General-purpose AI tools
- Developer- specific AI tools

General-purpose AI tools

- ChatGPT
- Bing Copilot
- Perplexity
- Dall-E

Developer-specific AI tools

- GitHub Copilot
- Google IDX
- Codeium
- Wasp Mage
- Cursor

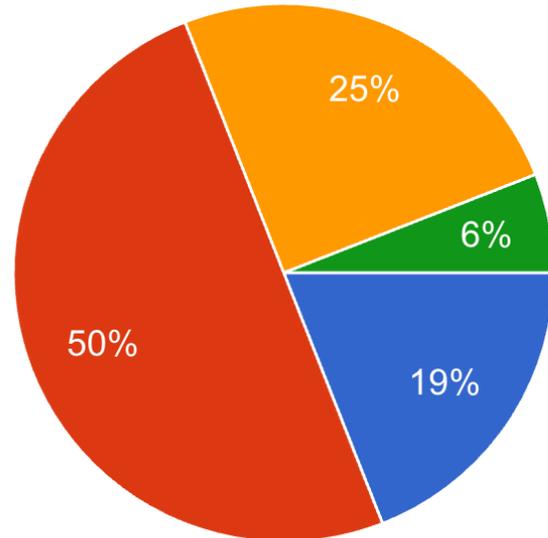
Experiment

- Conducted via survey
 - a) demographic information
 - b) section for participants not using AI tools
 - c) section for participants using AI tools
- Multiple channels of distribution (snowball, social networks)
- Most participants from B&H and Croatia

Results

What is your age group?

84 responses

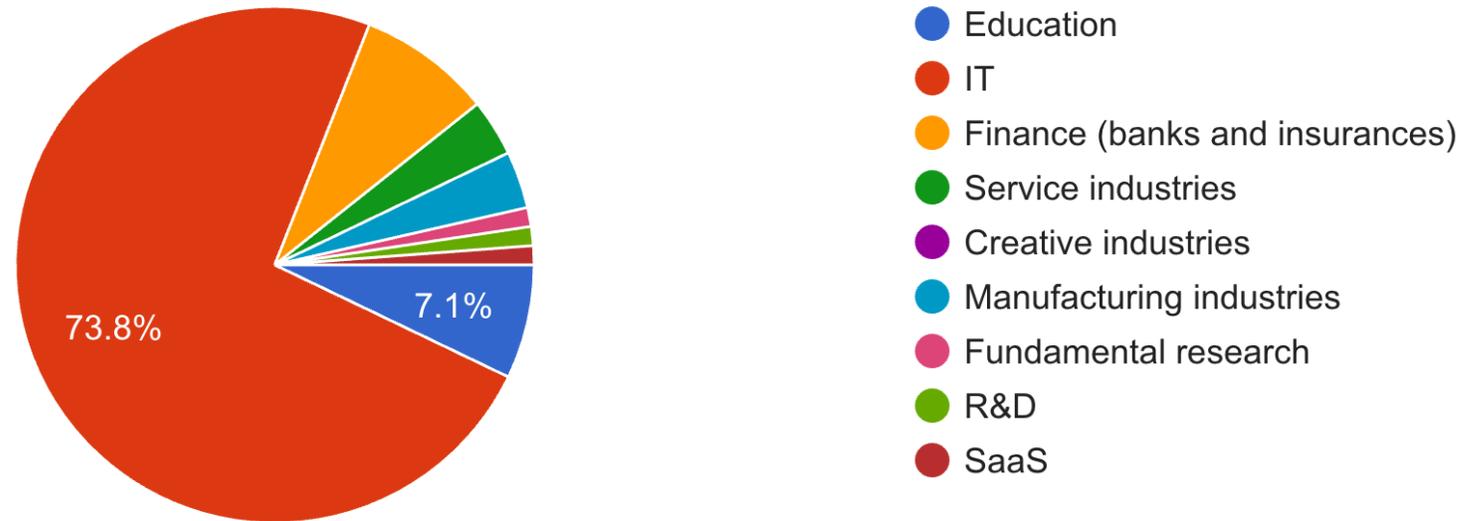


- 18-25
- 26-35
- 36-45
- 46-60
- 61 and older

Results

What is your business' primary sector?

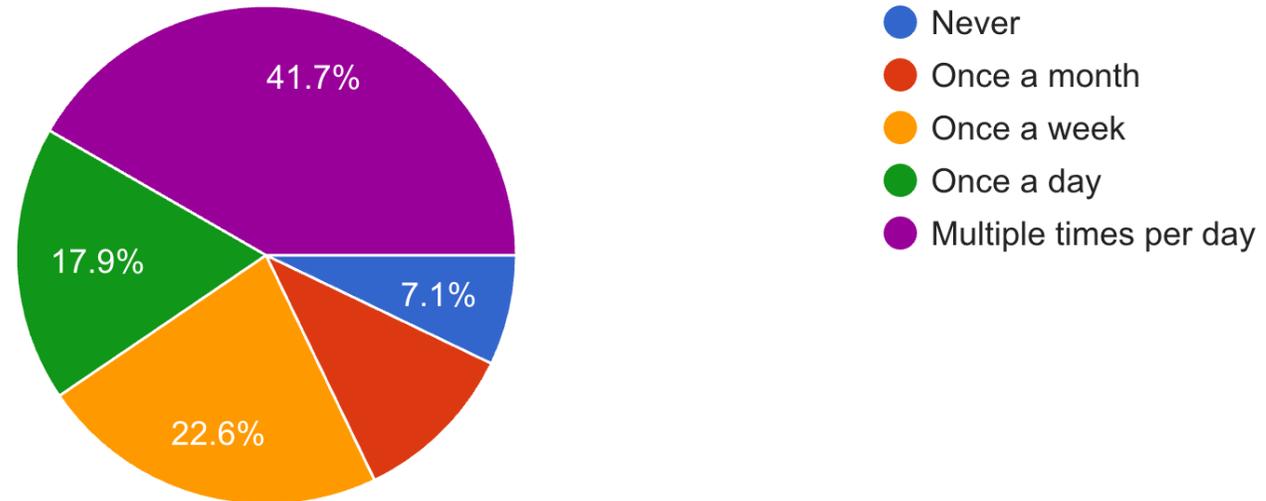
84 responses



Results

How frequently, on average, do you use AI-powered tools in your software development workflows?

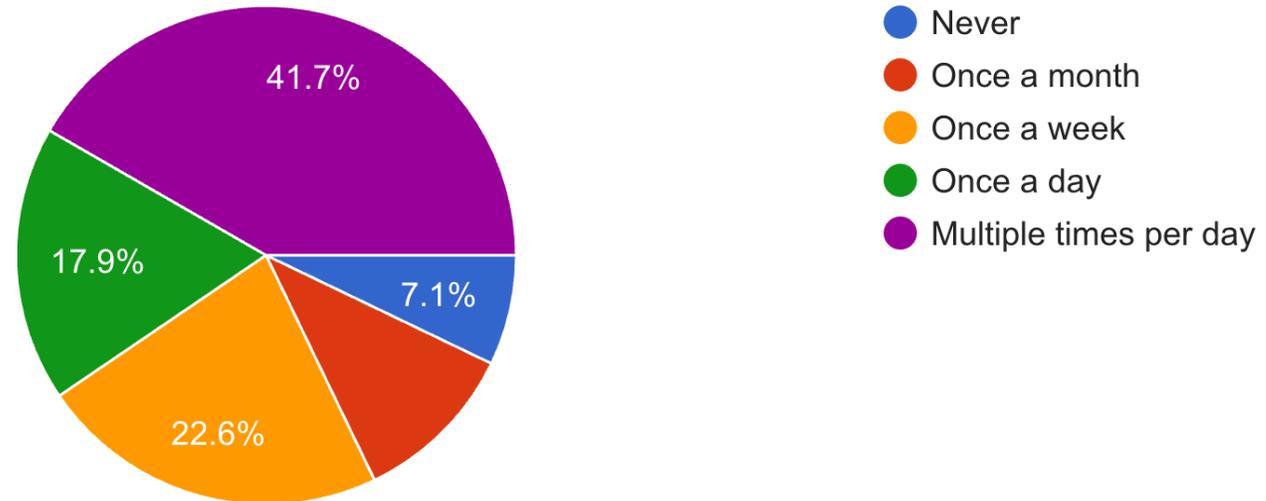
84 responses



Results

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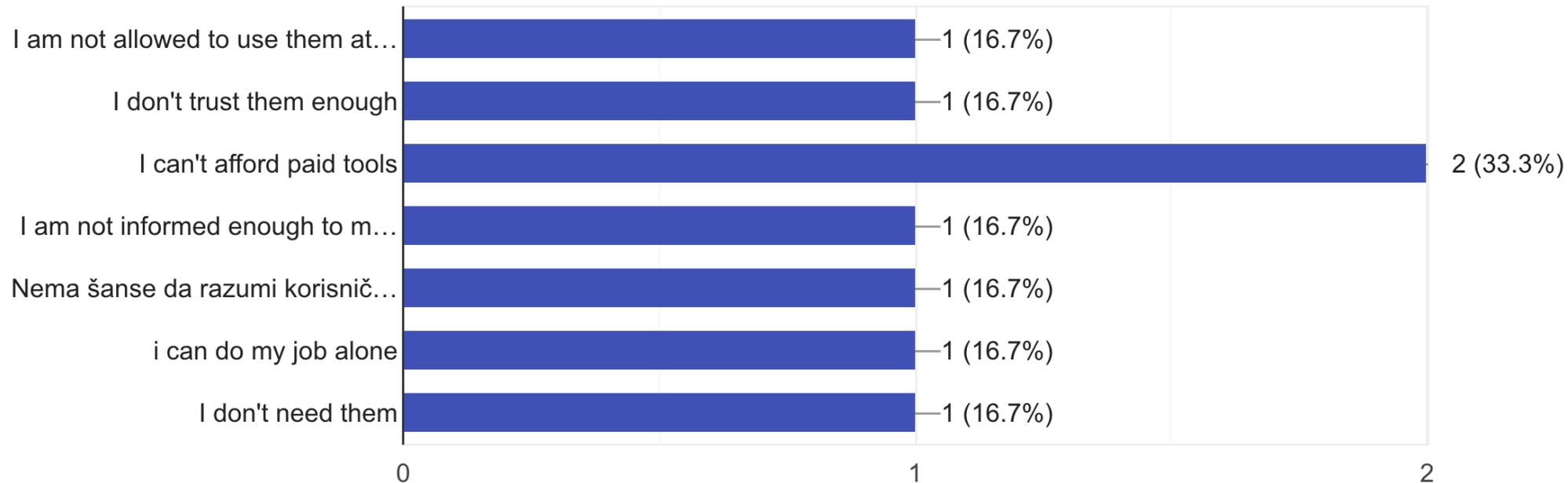
84 responses



Results

If you are not using AI tools, what is the biggest reason for that?

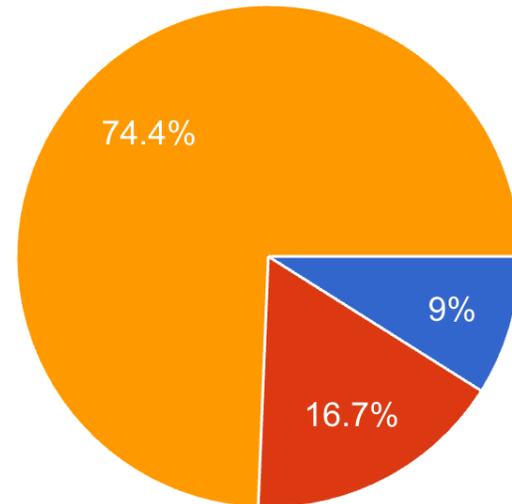
6 responses



Results

If you are using AI tools, where do you use them?

78 responses

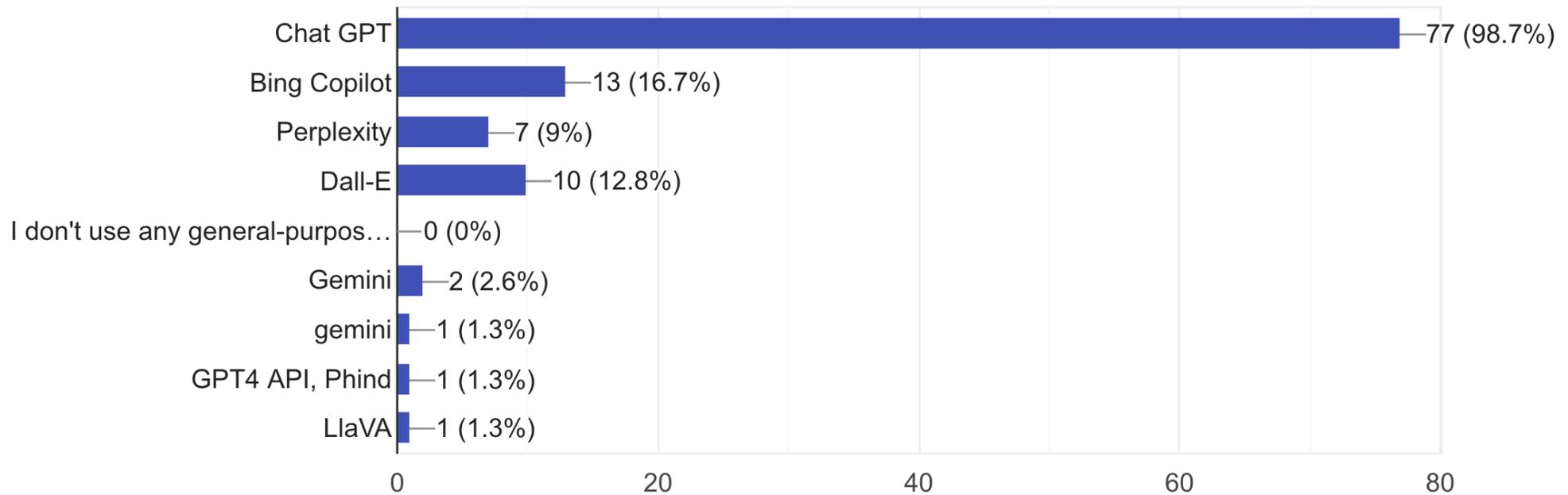


- Primarily for personal projects
- Primarily for company projects - business related
- Both for personal and business usage

Results

Which general-purpose AI tools do you use?

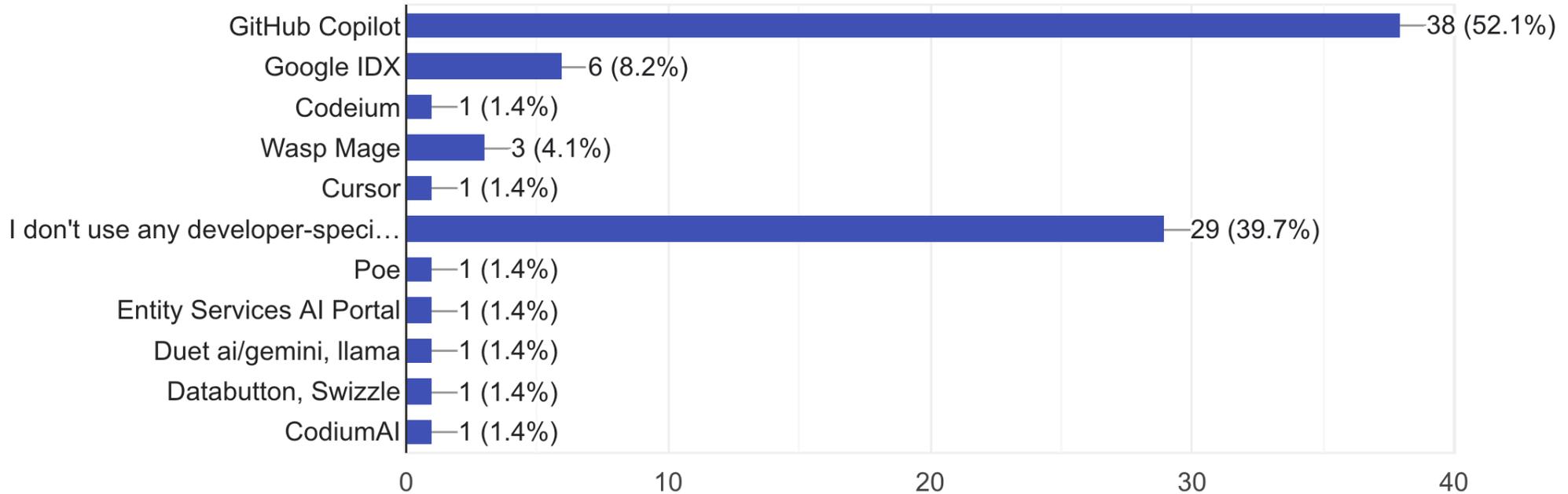
78 responses



Results

Which developer-specific AI tools do you use?

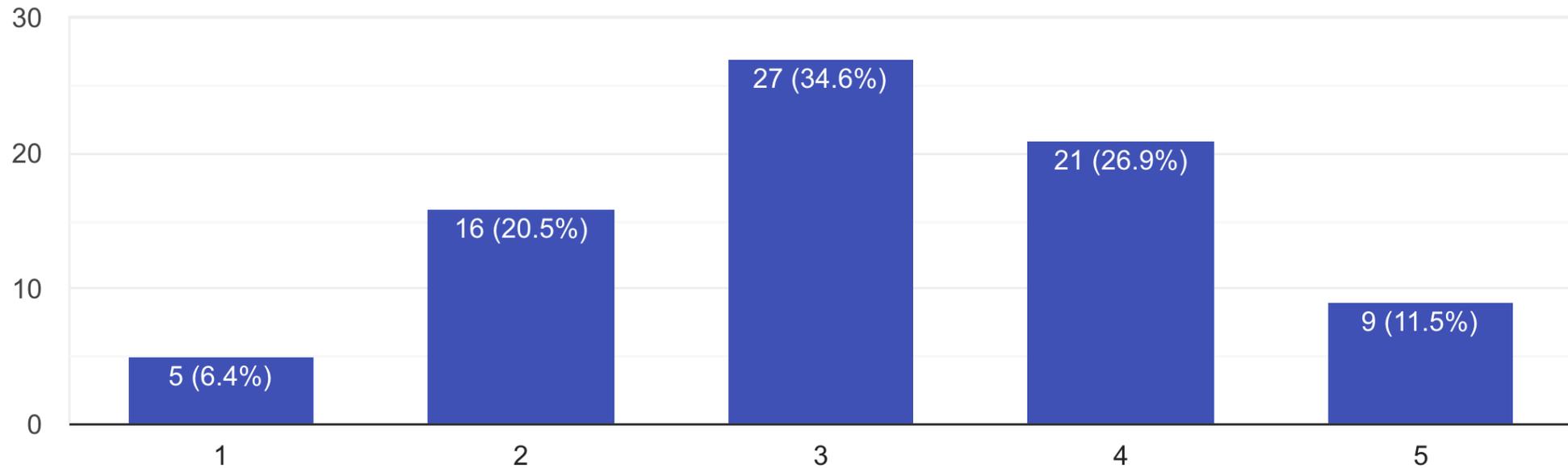
73 responses



Results

To what extent do you believe AI tools contribute to improving code readability in your projects?

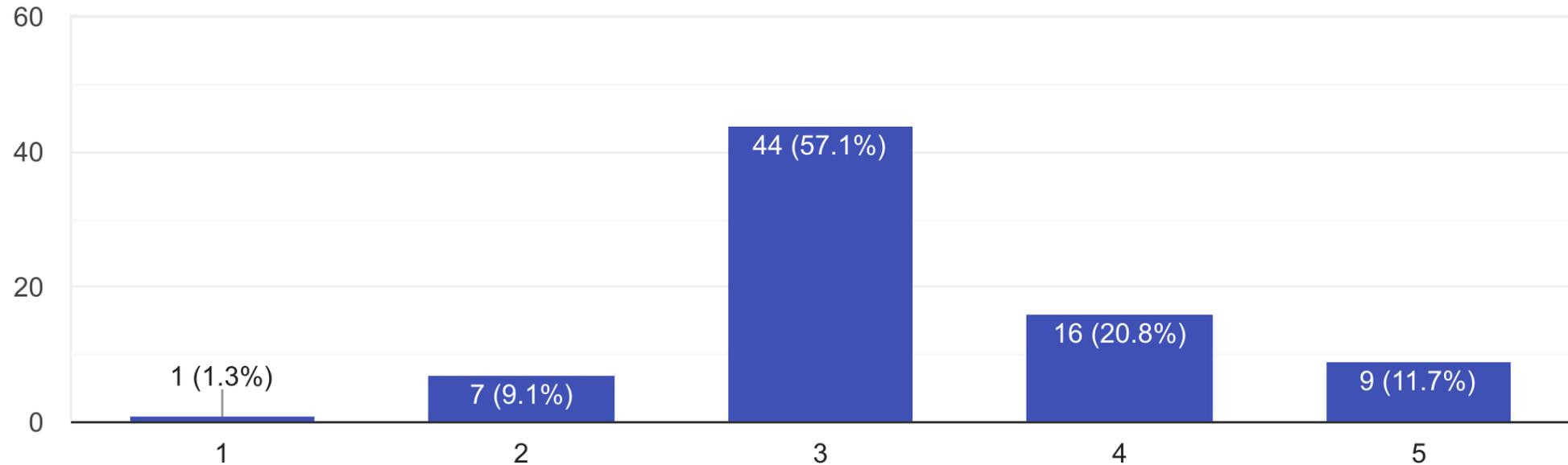
78 responses



Results

Have you noticed changes in code maintainability since incorporating AI tools?

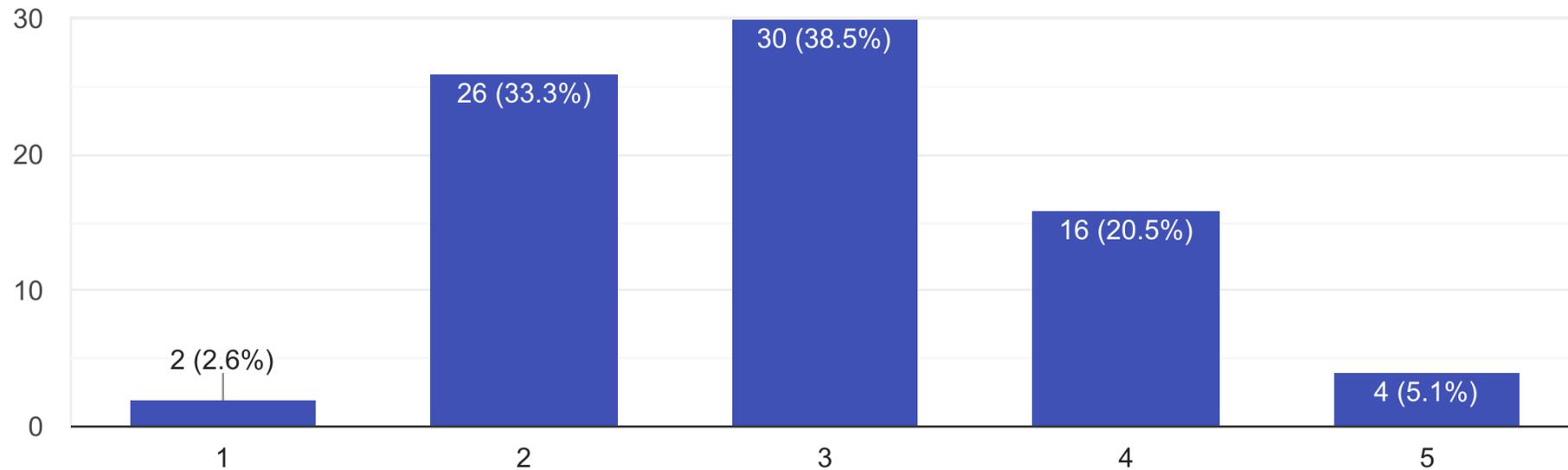
77 responses



Results

How confident are you in the accuracy and relevance of AI-generated code suggestions?

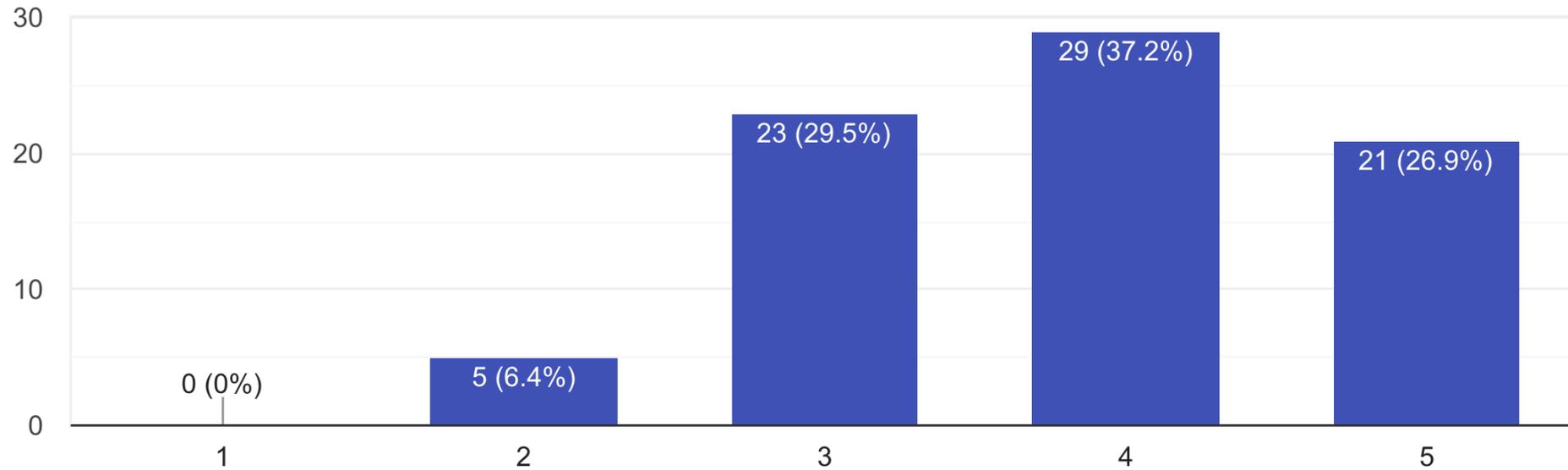
78 responses



Results

Do you think AI tools have positively influenced the overall efficiency of your coding process?

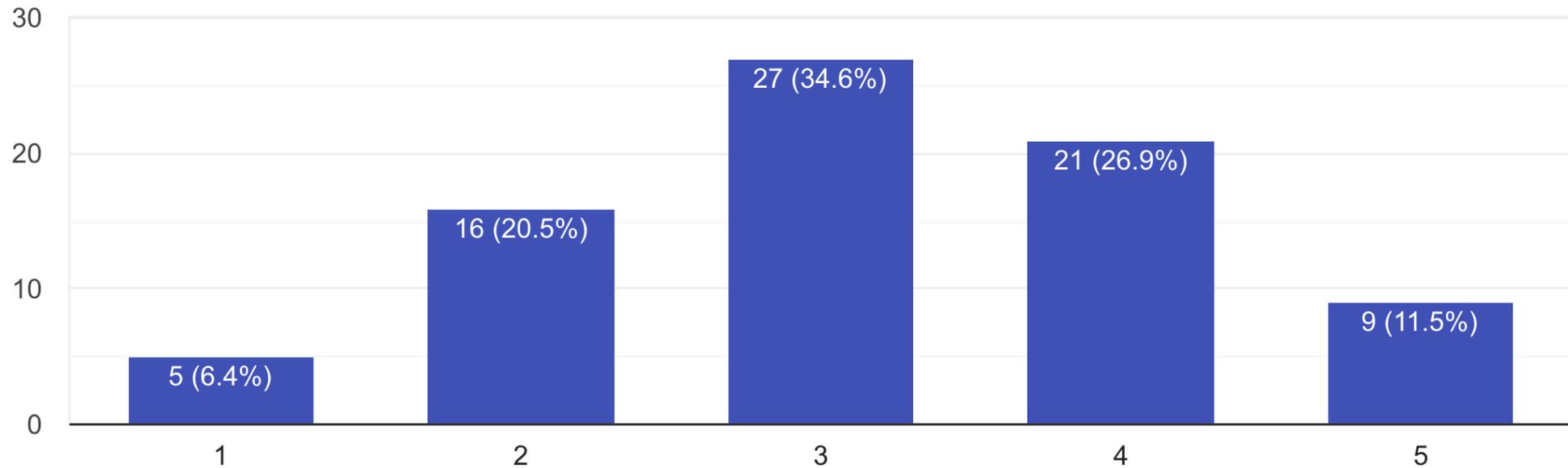
78 responses



Results

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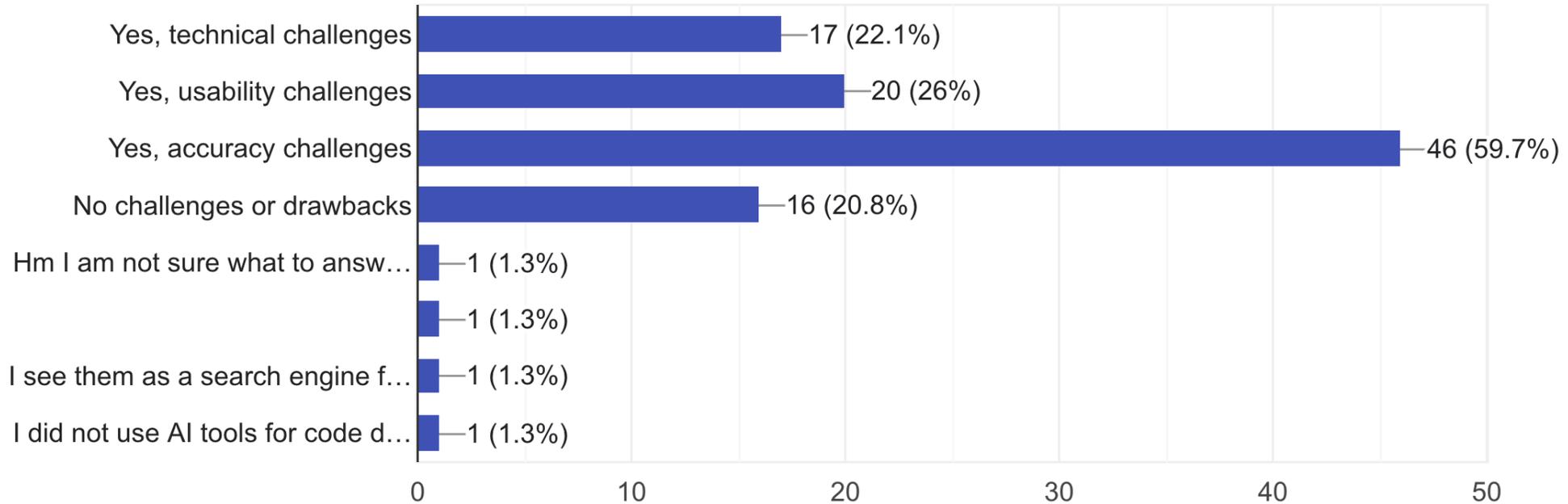
78 responses



Results

Have you encountered any challenges or drawbacks in using AI tools for code development?

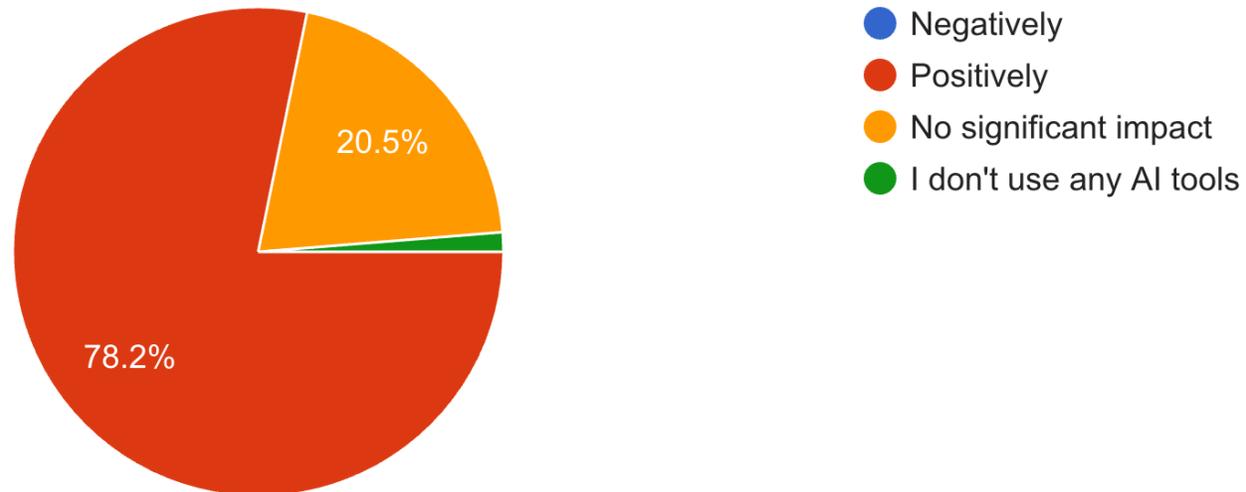
77 responses



Results

How has the adoption of AI tools impacted your overall satisfaction and productivity in software development?

78 responses



Conclusion

- General tools more widely used than dev-specific
- Positive impact on satisfaction after using AI tools
- Individual code quality metrics leave room to grow