

VisuFlow Survey Questions

Q1: Are you...

- Type: Multiple choice question with an open "Other..." field.
- Possible choices: [A Bachelor/Master student?; A researcher in academia (incl. Ph.D. student)?; A researcher in industry?; Other...]

Q2: Your research / study topic.

- Type: Free-text field.
- Mandatory.

Q3: How long have you been writing static code analysis?

- Type: Single-answer question.
- Possible choices: [I have never written static analysis; < 1 years; 1-2 years; 2-5 years; 5-10 years; > 10 years]
- Mandatory.

Q4: Which languages have you written static analysis for?

- Type: Multiple choice question with an open "Other..." field.
- Possible choices: [Java; JavaScript; C/C++; .NET; Objective C/Objective C++; Perl; PL/SQL; Python; Other...]
- Mandatory.

Q5: Which applications have you written static analyses for?

- Type: Multiple choice question with an open "Other..." field.
- Possible choices: [Security and privacy; Functional correctness; Program understanding; Automated performance optimization; Other...]
- Mandatory.

Q6: Which branches of static analysis have you written for?

- Type: Multiple choice question with an open "Other..." field.
- Possible choices: [Symbolic execution; Model checking; Data-flow analysis; Abstract interpretation; Other...]
- Mandatory.

Q7: On which program level do you usually write static analysis for?

- Type: Multiple choice question with an open "Other..." field.
- Possible choices: [Line-based; Function-based; Module-based; Program-based; System-based; Other...]

Q8: Have you written static analysis for industrial tools? Which ones?

- Type: Multiple choice question with an open "Other..." field.
- Possible choices: [I haven't written analyses for industrial tools.; Fortify; AppScan; CheckMarx; Klockwork; Coverity; FindBugs; VeraCode; Other...]

Q9: Do you use frameworks to write your analyses?

- Type: Multiple choice question with an open "Other..." field.
- Possible choices: [Soot; OPAL; WALA; Doop; Chord; Crystal; PMD; FinddBugs; Other...]

Q10: Can you list a few examples of analyses you have written?

- Type: Free-text field.

Q11: Do you find it easier to debug application code or static analysis code?

- Type: Scale from 1 (application code is harder to debug) to 10 (analysis code is harder to debug).
- Mandatory.

Q12: Why?

- Type: Free-text field.
- Mandatory.

Q13: When developing a static analysis, how long do you usually spend writing vs debugging your code?

- Type: Scale from 0 (100% of my time coding, 0% of my time debugging) to 10 (0% of my time coding, 100% of my time debugging).
- Mandatory.

Q14: In which cases have you debugged static-analysis code?

- Type: Free-text field.

Q15: Give a few examples of bugs you typically encounter when debugging static-analysis code.

- Type: Free-text field.

Q16: Which features of your coding environment do you use most when getting rid of those bugs?

- Type: Free-text field.
- Mandatory.

Q17: List the top 3 features of your coding environment that you particularly -like- when debugging static analysis.

- Type: Free-text field.
- Mandatory.

Q18: List the top 3 features of your coding environment that you particularly -dislike- when debugging static analysis.

- Type: Free-text field.
- Mandatory.

Q19: Which features would you like to have (to support debugging static analysis) that your coding environment does not provide?

- Type: Free-text field.

Q20: When writing application code, how long do you usually spend writing vs debugging your code?

- Type: Scale from 0 (100% of my time coding, 0% of my time debugging) to 10 (0% of my time coding, 100% of my time debugging).
- Mandatory.

Q21: Give a few examples of bugs you typically encounter when debugging application code.

- Type: Free-text field.

Q22: Which features of your coding environment do you use most when getting rid of those bugs?

- Type: Free-text field.
- Mandatory.

Q23: List the top 3 features of your coding environment that you particularly -like- when debugging application code.

- Type: Free-text field.
- Mandatory.

Q24: List the top 3 features of your coding environment that you particularly -dislike- when debugging application code.

- Type: Free-text field.
- Mandatory.

Q25: Which features would you like to have (to support debugging application code) that your coding environment does not provide?

- Type: Free-text field.

Q26: Rate how important the following features are to you when debugging static analysis.

- Type: Multiple-choice grid.
- Categories: [Good visuals of graphs (Control-flow graphs, call-graphs, etc.); Good visuals (not graphs); Showing the intermediate representation on which the analysis is based; Providing default test cases; Quick updates; Breakpoints; Stepping functionalities through both the analysis code and the test cases]
- Choices for each categories: [Not important; Neutral; Important; Very important; Not applicable]

Q27: Are there features that you would like to add and how important are them to you?

- Type: Free-text field.

Q28: Which development environment do you use most often when writing static analysis?

- Type: Single-answer question.
- Possible choices: [A simple text editor (vim, emacs...); An IDE (Eclipse, NetBeans, ...); Other solutions]
- Mandatory.

Q29: Which editor(s) do you use?

- Type: Free-text field.
- Mandatory

Q30: Why?

- Type: Multiple choice question with an open "Other..." field.
- Possible choices: [It is fast; It is lightweight; It is highly customizable; The UI is simple; it is just what I need; Other tools have too many functionalities, it is confusing; It is installed by default on most platforms; It provides coding support (error checking, code navigation and generation, etc.); It provides build and run support (automated and incremental building, dependency importing, run configurations, etc.); It is specifically designed for my use case; Other...]

Q31: Would you be willing to participate in a user study on a prototype supporting the debugging of static analysis?

- Type: Single-answer question.

- Possible choices: [Yes; No; Maybe]
- Mandatory.

Q32: If yes or maybe, please provide a contact email. This email will only be used to contact you for a subsequent user study. It will be removed from the rest of the survey to keep the data anonymous.

- Type: Free-text field.