

# Assessing a Conceptual Framework of Empathy in Software Engineering

Dear survey participant,

This study is part of an ongoing effort to validate and refine a **Conceptual Framework of Empathy in Software Engineering**. This framework was built by analyzing web articles about empathy in software organizations. Considering that you wrote one of those articles, we appreciate your agreeing to participate in this inquiry. The survey takes about 30 minutes to complete.

By clicking the "NEXT" button, you consent to participate in this study. This will flag your authorization to use your answers in our current and future research. Such use will include presentations at scientific or professional meetings, publishing in scientific journals, and sharing anonymous information with other researchers.

We want you to know that our research follows a high academic standard and is conducted anonymously.

Your feedback is very precious to us!

Please don't hesitate to contact us for more information about our study.

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\* Indica uma pergunta obrigatória

## Demographic Information

This section aims to collect general information about you to better understand the diversity of perspectives in our study

1. In which country do you currently work or last worked? \*

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2. 2. Which of the following best describes your role in your current or most recent job? \*

*Marque todas que se aplicam.*

- ☐ Software Developer/Engineer
- ☐ Quality Assurance/Tester
- ☐ Project Manager
- ☐ Senior Manager/Executive
- ☐ Business Analyst
- ☐ UX/UI Designer
- ☐ DevOps Engineer
- ☐ Product Manager
- ☐ Outro: \_\_\_\_\_

3. 3. How many years of professional experience do you have in your field? \*

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- ☐ Less than 1 year
- ☐ 1–5 years
- ☐ 5-10 years
- ☐ 10-15 years
- ☐ More than 15 years

In this section, we are interested in your level of expertise about empathy in software engineering

4. 4. Please indicate your level of expertise about **empathy in software engineering** \*  
by selecting the option that best describes your knowledge level:

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- ☐ Novice: Limited understanding of the topic, minimal experience or exposure.
- ☐ Intermediate: Moderate understanding of the topic, some experience or exposure.
- ☐ Advanced: Strong understanding of the topic, significant experience or exposure.
- ☐ Expert: Comprehensive understanding of the topic, extensive experience or expertise demonstrated.

Now, we will present our framework on Empathy and its elements. As we said, this framework was built by analyzing web articles about empathy in software organizations we collected in DEV and Medium.

Before answering the questions, please watch the video presenting the framework available at [https://youtu.be/6\\_oJm7Ldij4](https://youtu.be/6_oJm7Ldij4) and explore [the interactive Framework here](#) (use forward and backward arrows to navigate it).

Also, you can [download the transcripts of the video](#) if you want.

You declare that you have watched the video and explored the framework by clicking the "NEXT" button.

In this section, we will ask you about how the framework can influence your perception of empathy in Software Engineering (SE).

5. 5. After exploring the framework, what changed in your perception of empathy in SE? For example, are there concepts or ideas you did not know about before, now think about differently, or now understand more completely? \*

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6. 6. What have you learned about empathy in SE from our framework? \*

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7. 7. Do you disagree with any element presented in our framework? \*

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☐ Yes

☐ No

8. 8. If yes, how? If not, why? \*

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9. 9. Are there any concepts or definitions within the framework that you find confusing or misleading? \*

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☐ Yes

☐ No

10. 10. If yes, how? If not, why? \*

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In this section, you will assess the framework in relation to its completeness and accuracy.

11. 11. In your opinion, and considering a 0-10 scale, with 0 representing very low completeness and 10 representing high completeness, do you think the framework is **complete** to represent empathy in software engineering? \*

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0	1	2	3	4	5	6	7	8	9	10
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. 12. What changes the framework needs to better represent empathy in software engineering? \*

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13. 13. In your opinion, and considering a 0-10 scale, with 0 representing very low accuracy and 10 representing high **accuracy**, do you think the framework is accurate to represent empathy in software engineering? \*

*Marcar apenas uma oval.*

0	1	2	3	4	5	6	7	8	9	10
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. 14. What changes do you think the framework needs to improve its accuracy? \*

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15. 15. Considering the practices captured in our framework, would they influence any of your software engineering activities? \*

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☐ Yes

☐ No

16. 16. If yes, how? If not, why? \*

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17. 17. In your opinion, are the effects of practicing empathy feasible to achieve by the practices captured in our framework? \*

*Marcar apenas uma oval.*

☐ Yes

☐ No

18. 18. If yes, how? If not, why? \*

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19. 19. Do you suggest adding any additional practice to our framework? If yes, please explain the practice and its effects. \*

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In this section, you will give your opinion on the structure and use of the framework in your work.

20. 20. Concerning the framework, choose the option that best represents your opinion.

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*Marcar apenas uma oval por linha.*

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
<b>I find the framework easy to use to practice empathy in SE.</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>I find the framework useful for practicing empathy in SE.</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Assuming the framework was available at my job, I predict I would use it regularly.</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Assuming the framework was available at my job, I would recommend it to other practitioners.</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



21. 21. Considering the usefulness of the framework, how would you use it in your work activities? \*

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Almost there! In this section, we are interested in how the framework can mitigate empathy-related challenges in the workplace.

Considering the following barriers to sustain empathy in the workplace:

- **Excessive focus on technical issues:** prioritizing technology over empathy.
- **Individualistic perspective:** lack of practitioners' effort to get the perspective of others.
- **Toxic organizational culture:** negative cultural aspects that affect empathy
- **Difficulty in expressing sentiments:** the challenge of understanding tone and intention in communication.
- **Influence of unconscious bias:** stereotypes and negative perceptions within the tech industry.
- **Work constraints:** the pressures developers face can hinder empathetic development.

22. 22. Which of those barriers do you believe can be overcome in your work environment? \*

*Marque todas que se aplicam.*

- ☐ Excessive focus on technical issues
- ☐ Individualistic perspective
- ☐ Toxic organizational culture
- ☐ Difficulty in expressing sentiments
- ☐ Influence of unconscious bias
- ☐ Work constraints
- ☐ None

23. 23. How would you approach or address those barriers in your workplace? \*

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24. 24. Which barriers do you consider particularly difficult or impossible to overcome in your work environment? \*

*Marque todas que se aplicam.*

- ☐ Excessive focus on technical aspects
- ☐ Individualistic perspective
- ☐ Toxic organizational culture
- ☐ Difficulty in expressing sentiments
- ☐ Influence of unconscious bias
- ☐ Work constraints
- ☐ None

25. 25. Why do you think these barriers persist despite efforts to address them? \*

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26. 26. Do the practices listed in the framework help overcome those barriers? \*  
(You can explore [the interactive Framework here.](#))

*Marcar apenas uma oval.*

- ☐ Yes
- ☐ No

27. 27. If yes, how? If not, why? \*

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Last one!

28. 28. Do you have any additional comments or feedback regarding the framework that you would like to share?

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Finished! Thank you so much!

If you are interested in receiving the global and anonymous results of this study, please send me an email.

Lidiany Cerqueira ([lidiany.cerqueira@ufba.br](mailto:lidiany.cerqueira@ufba.br)), PhD Candidate at Federal University of Bahia/Virginia Commonwealth University

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