

“Is My Mic On?”

## Preparing SE Students for Collaborative Remote Work and Hybrid Team Communication

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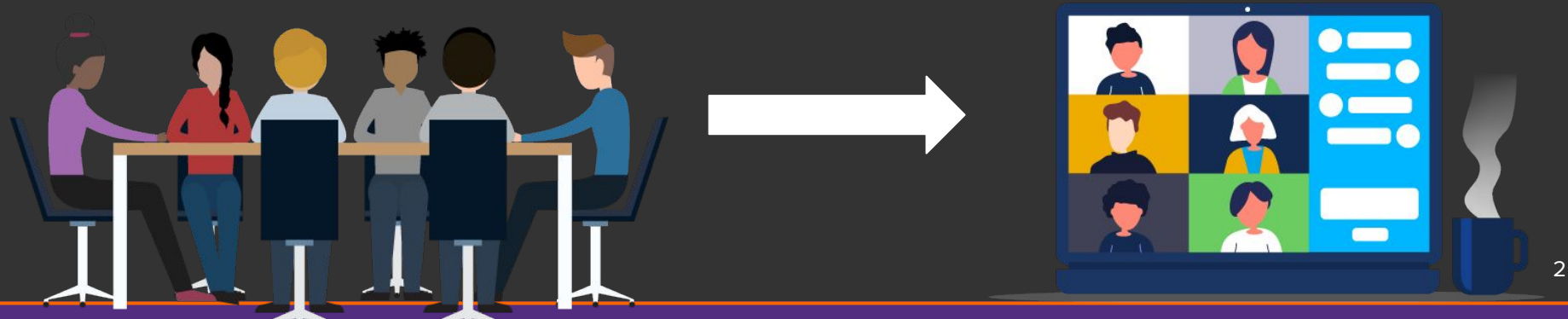


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# SE Courses & Teamwork

- Traditionally, SE students have semester-long team projects.
  - These projects simulate an industry-level project.
  - They teach students important, marketable workforce skills.
- However, due to COVID-19, many student projects are now online.





# COVID-19 Impact on Professional Software Developers

- Abrupt switch from office life to working from home.
- Challenges involving communication identified [1].
  - Increased response times between developers.
  - Pressure for developers to be responsive at all times.

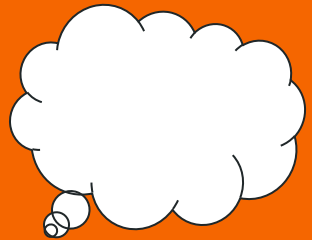




# How well do teams communicate remotely?

- Communication has been identified as a deficient area in recent SE graduates [2, 3].
- Challenges of recently-graduated remote developers have been identified, giving insights into necessary SE curriculum changes for academic institutions [4].
- Team communication is perceived as a challenge to students [5].
  - They also preferred face-to-face meetings over remote communication methods [5].
- The increase in distributed teams has forced professional software development teams to adopt online communication tools [6].
- A popular tool, Slack, has been called an “email killer” due to the reduced need to send emails in the workplace [7].

Are online and hybrid  
classes preparing  
students for future remote  
development roles?





# Research Questions

1. What communication tools are currently being used by industry?
2. What communication tools are used by student teams?
3. What do teams define as effective communication while working remotely?
4. How can we get student developer communication tools to be more reflective of industrial development while still staying learning-centric?





# Methods: SE Student Teams

## Distribution

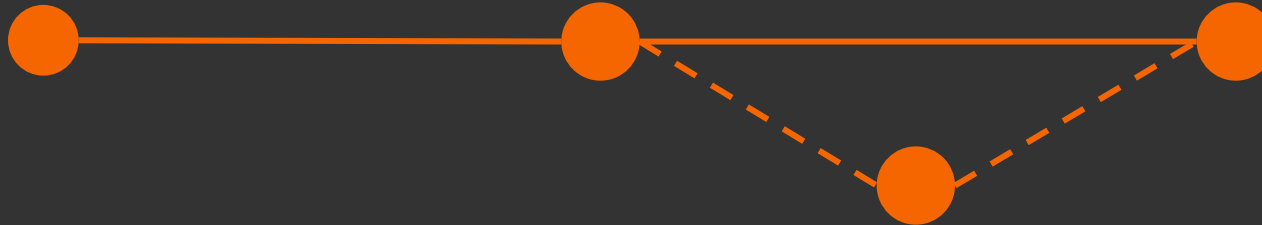
Surveys distributed to students on social media platforms.

## Survey Completion

Students complete survey provided within advertisements.

## Data Collection

Survey & interview data collected from multiple institutions.



## Optional Interview

Students opt-in to interview with the research team.



# Methods: Professional Software Development Teams

## Distribution

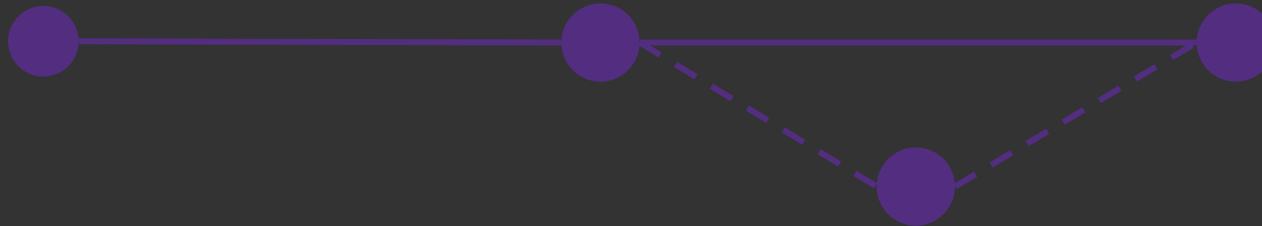
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## Methods: Analysis

- We plan to conduct a thematic analysis using open coding.
  - Allows us to determine frequency of the responses.
- After coding, we will be able to compare and contrast tool usage between professional and student software development teams.
- We plan to give recommendations to the industry and academic communities based on our findings.



# Conclusion

- Presented a proposed evaluation of communication tools utilized by software development teams in industry (professionals) and academia (students).
- We will make recommendations to academia and industry based on the findings of this research.
  - Learn about industry collaboration tools.
  - Learn about academic collaboration tools.
- If we can learn about these tools and how they are being used, we can better prepare students for their future careers in industry.



# References

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Thank you!

