

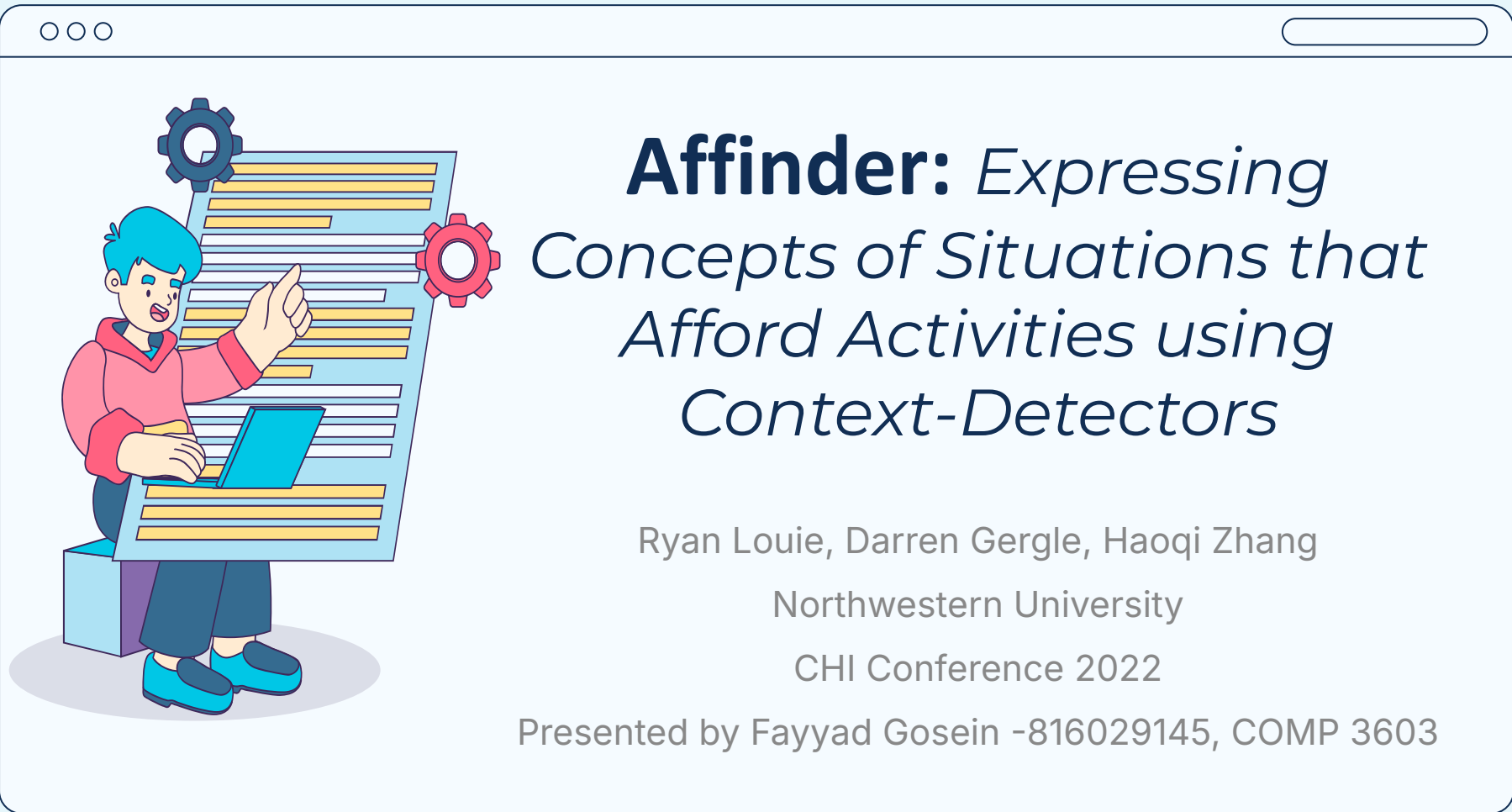
TrioDesigns

-If is not quality we ain't doing it right!-

GROUP MEMBERS:

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Affinder: *Expressing Concepts of Situations that Afford Activities using Context-Detectors*

Ryan Louie, Darren Gergle, Haoqi Zhang

Northwestern University

CHI Conference 2022

Presented by Fayyad Gosein -816029145, COMP 3603

Background

- Authors:
 - - Ryan Louie, Darren Gergle, Haoqi Zhang (Northwestern University)
- Conference:
 - CHI Conference 2022 on Human Factors in Computing Systems
- Focus:
 - Expressing human situations in context-aware technology

Abstract

- Objective:
 - - Affinder helps designers express human situations using context-detectors.
- Contribution:
 - Bridges the gap between human concepts and machine-readable features.
- Findings:
 - Improves designers' ability to express complex human concepts in context-aware systems.

Methodology

- Affinder Environment:
 - - Block-based programming environment for designing context-aware systems.
- Core Features:
 - Unlimited Vocabulary Search, Reflection Prompts, Simulation & Repair Tools
- Comparison Study:
 - Affinder tested against a baseline tool in a study.

Methodology Cont'd

A) Simulating Concept Variables, and Labeling Inaccurate Cases

set open spaces to play to parks or beaches

Assess Accuracy of Concept Variables

Repair Shop


open_spaces_to_play

Chicago

Simulate Concept

Do these places accurately represent "open spaces to play", thus good for "toss a frisbee"?

35 results found



Alfred Caldwell Lily Pool

parks, venues, nonprofit,

Chicago Park District - OZ PARK

parks, playgrounds, tennis,

31st Street Beach

swimmingpools, beaches,

Lake Michigan

beaches, lakes,

Label

Yes No

Yes No

Yes No

Yes No

Issue List

Garfield Park Conservatory

parks, gardens, hiking,

Resolved Cases

B) Repairing Concept Variables, and Resolving Issues

set open spaces to play to parks and not venues or beaches

Assess Accuracy of Concept Variables

Repair Shop


open_spaces_to_play

Chicago

Simulate Concept

Do these places accurately represent "open spaces to play", thus good for "toss a frisbee"?

35 results found



Chicago Park District - OZ PARK

parks, playgrounds, tennis,

31st Street Beach

swimmingpools, beaches,

Lake Michigan

beaches, lakes,

Label

Yes No

Yes No


Yes No

Issue List

Garfield Park Conservatory

parks, gardens, hiking,

Resolved Cases



Alfred Caldwell Lily Pool

parks, venues, nonprofit,

Figure 5: Designers use Affinder's simulation and repair tools to refine concept expressions. The tool allows for the identification of inaccurate context features (e.g., parks that are not suitable for playing) and enables users to adjust and repair these expressions, ensuring more accurate and contextually appropriate results.

Results

- Key Findings:
- - Affinder users created richer, more complex concept expressions.
- Performance:
 - Improved accuracy and scope of concepts compared to baseline tool.

Discussion

- Implications:
 - - Affinder improves context-aware application design.
- Limitations:
 - Some issues with underscoping and overscoping detected.
- Comparison:
 - Compared to tools like IFTTT, Affinder allows more complex situation expressions.

Conclusion

- Main Takeaways:
- - Affinder enhances the ability to encode human situations into machine-readable features.
- Impact:
 - Important contribution to context-aware computing and HCI research.

References

- Ryan Louie, Darren Gergle, and Haoqi Zhang. 2022. Affinder: Expressing Concepts of Situations that Afford Activities using Context-Detectors. CHI Conference on Human Factors in Computing Systems, April 29–May 5, 2022. New Orleans, LA, USA.

<https://doi.org/10.1145/3491102.3501902>

Challenges of Moderating Social Virtual Reality



COMP 3603 - Human-Computer Interaction, presented by 816034531 - Sean Bancroft

Background

- Authors: Nazanin Sabri, Bella Chen, Annabelle Teoh, Steven P. Dow, Kristen Vaccaro, Mai ElSherief.
- Affiliations: University of California, San Diego.
- Published at CHI 2023 Conference in Hamburg, Germany.
- Focus: Content moderation challenges in social VR environments like AltspaceVR, Horizon Worlds, and Rec Room.

Abstract

Main Objectives:

- Explore moderation challenges in social VR environments.
- Identify harmful behaviors enabled by real-time, voice-based, and embodied interactions.

Key Contributions:

- 13 distinct harmful behaviors identified.
- Insights into current moderation strategies and limitations.

Methodology

- Virtual Field Research: 100 scheduled events observed in AltspaceVR, Horizon Worlds, and Rec Room.
- Interviews with 11 moderators to understand their practices.
- Mixed-methods approach: combination of participant observation and qualitative interviews.

Results

- 45% of observed events had harmful behaviors.
- Moderators were present in 51% of events but addressed harmful behavior in only 24% was stated in the findings.
- Identified behaviors: disruptive noise, harassment, stalking, physical harm.

Platform	Observed Events	Events With Harmful Behaviors	Harmful behaviors (moderator addresses problem)	Harmful behaviors (no moderator)	Harmful behaviors (moderator present but no action)
AltspaceVR	45	9	8	1	0
Horizon Worlds	25	12	2	8	2
Rec Room	30	24	4	13	7
Total	100	45 (45%)	14	22 (49%)	9

Table 1: Observations performed for each platform. We observed 100 total events. In 45 events, one or more harmful behaviors occurred (the number of instances of harmful behavior is reported in Table 2). 49% of all events where a harmful behavior occurred had no moderators present.

Results Cont'd

	Harmful Behaviors Observed in VR	Instances	Moderated	Prior Work
<i>Enabled by Voice</i>	Disruptive noise	17	6	[70]
	Harmful or harassing language	10	1	[70, 95]
<i>Enabled by Virtual Embodiment</i>	Disruptive movement	9	5	[31, 57]
	Enactment of physical harm	9	0	[154]
	Group acts of bullying	3	0	[38, 93]
	Not following social norms	3	2	[147]
	Enactment of sexual assault	2	0	[83]
	Following and stalking avatars	1	0	[18, 113, 135, 136]
	Enactment of self-harm or suicide	1	0	[81]
	Enactment of violence due to incitement	1	0	[82, 121]
<i>Enabled by Platform Affordances</i>	Misuse of moderation power	4	N/A	[157]
	Misuse of platform features	3	1	[123]
	Pornographic content	2	0	[39]
	Total	65	15 (24%)	

Table 2: The number of times specific harmful behaviors were observed in VR. The total number of incidents is larger than the number of events that had harmful behavior because one event could have multiple occurrences of harmful behavior. Prior work refers to studies that have identified similar harms in other (often non-ephemeral) social media platforms.

Discussion

- Real-time moderation in VR is difficult due to the ephemeral nature of interactions.
- Limited tools available for moderators to track and respond to harmful behaviors.
- Comparison: Unlike social media, VR environments need proactive moderation strategies.

Conclusion

- Social VR environments require new tools and strategies for effective moderation.
- Real-time, proactive approaches are necessary for preventing harm.
- Further research is needed to improve moderator tools and strategies.

References

- Sabri, N., Chen, B., Teoh, A., Dow, S. P., Vaccaro, K., & ElSherief, M. (2023). Challenges of Moderating Social Virtual Reality. CHI '23, Hamburg, Germany, <https://dl.acm.org/doi/10.1145/3544548.3581329>



Reading Between the Lines: Modeling User Behavior and Costs in AI-Assisted Programming



Authors: Hussein Mozannar, Gagan Bansal,
Adam Fourney, Eric Horvitz

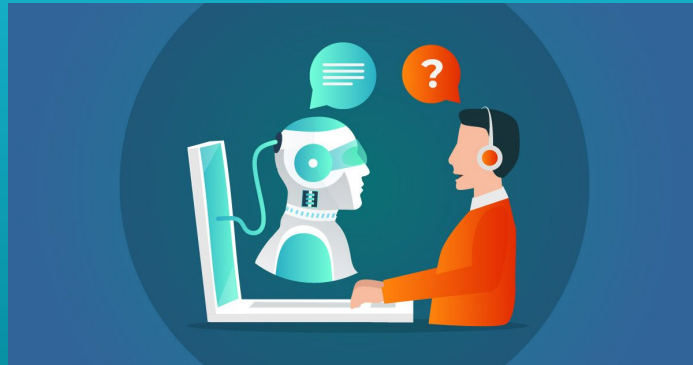
Published in: CHI Conference 2024

Background

- Authors:
 - Hussein Mozannar (MIT)
 - Gagan Bansal, Adam Fourney, Eric Horvitz (Microsoft Research)
- Published in: ACM CHI Conference on Human Factors in Computing Systems (CHI 2024)

Abstract

The paper studies how programmers interact with AI code-recommendation systems like GitHub Copilot. It introduces the CodeRec User Programming States (CUPS) taxonomy to identify inefficiencies and time costs.



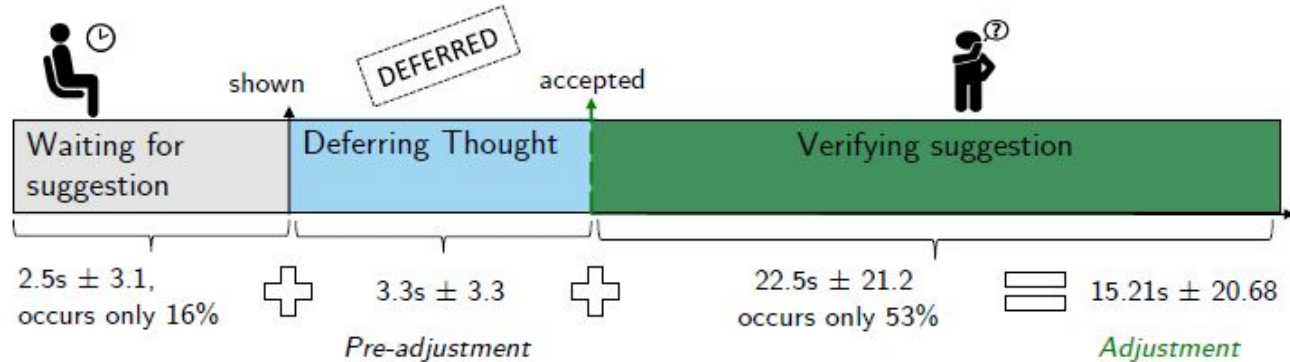
Methodology

1. User study with 21 programmers interacting with GitHub Copilot.
2. Participants labeled their actions using the CUPS taxonomy after coding sessions.
3. Collected data on states like prompt crafting, editing, and verifying suggestions.


Results

Key Findings:

- Programmers spend 22.4% of session time verifying suggestions.
- AI suggestions often cause inefficiencies when verification is deferred.



Discussion

- AI-assisted tools like Copilot  can enhance productivity, but better integration with workflows is needed.
- Suggested improvements in AI interfaces to reduce disruptions.

Conclusion

- ❖ The study offers insights into AI-human interactions during coding.
- ❖ CUPS taxonomy provides a framework for optimizing future AI coding tools.

References

Article Used:

Hussein Mozannar, Gagan Bansal, Adam Fourney, and Eric Horvitz. 2024. Reading Between the Lines: Modeling User Behavior and Costs in AI-Assisted Programming. In Proceedings of the CHI Conference on Human Factors in Computing Systems (CHI '24). Association for Computing Machinery, New York, NY, USA, Article 142, 1–16.

<https://dl.acm.org/doi/10.1145/3613904.3641936>