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VAL: Interactive Task Learning with GPT Dialog Parsing

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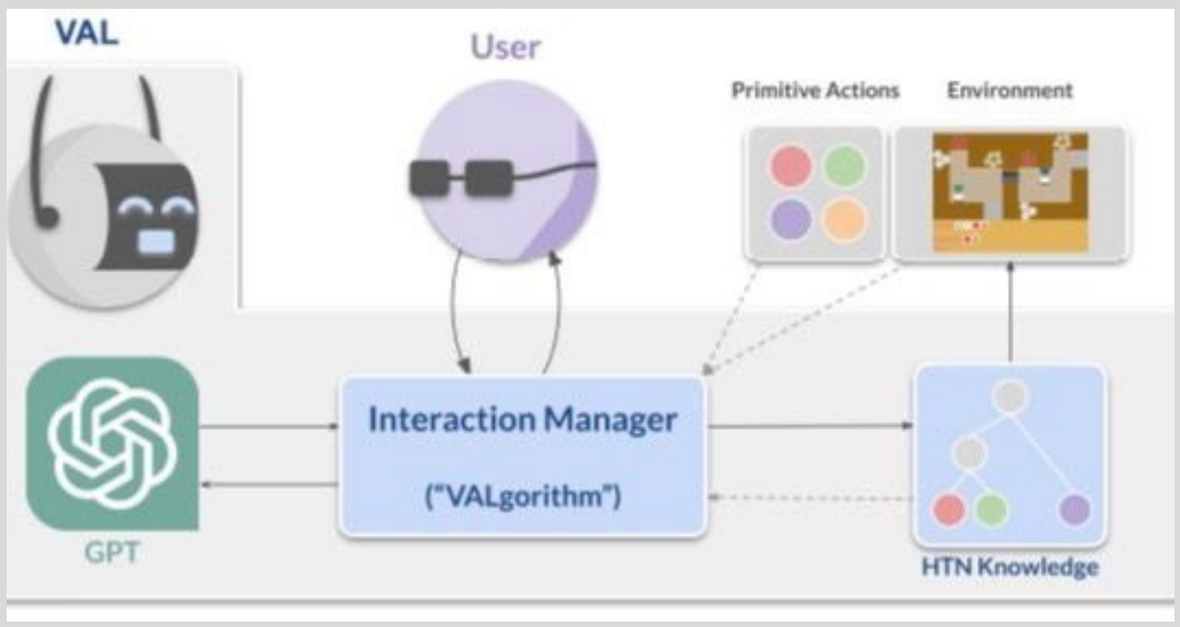


01 INTRODUCTION

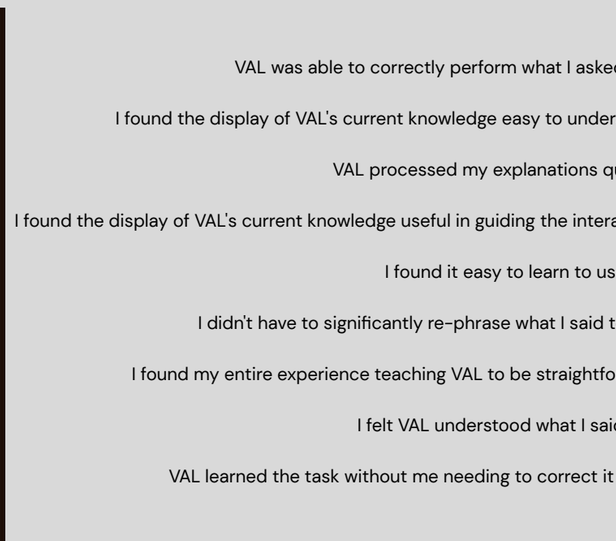
- The Verbal Apprentice Learner is an interactive task learning system (ITL), designed to enhance language parsing using large language models (LLMs).
- The main objective is to improve VAL's usability and robustness by integrating LLMs to overcome limitations in syntactic and semantic parsers.

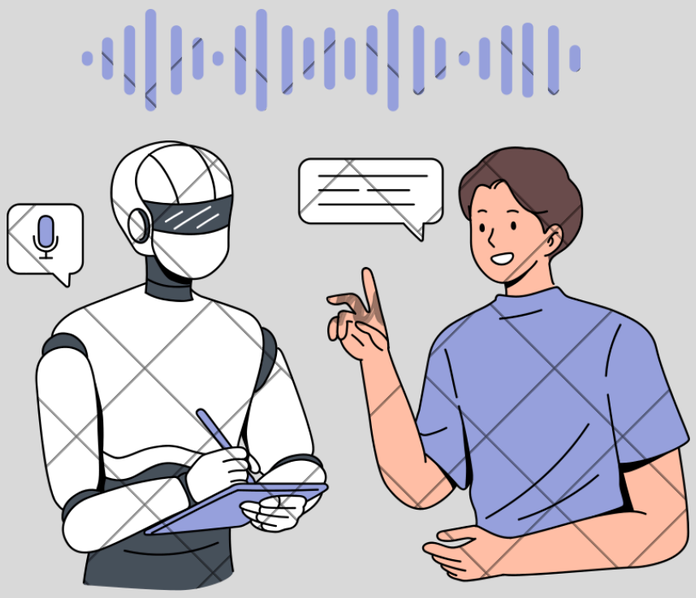
02 RESEARCH DESIGN

12 volunteers were used to interact with the VAL system through a video gaming environment called Overcooked-AI where several tasks were taught to VAL.

A vast variety of features were implemented for the improvement of the system's performance.

- Confirmatory Dialog
- Knowledge Display
- Real-time Action Performance
- The Undo Button





03 RESULTS

- Survey responses were mostly positive, with more agreement on VAL's usability and task performance.
- Participants expressed frequent corrections, indicating room for improvement in VAL's dialogue handling.

04 ANALYSIS

- VAL performs tasks on user instructions therefore it requires users to have prior knowledge and provide well-structured, precise tasks for optimal performance.
- VAL still excels in taking on complex tasks despite its limitations.

05 CONCLUSION

- VAL is an advanced ITL, that can be beneficial for users that needs to execute more complex tasks.
- Despite its limitations, it's ability to continuously adapt, can help users enhance their standard of living.

A MIXED-METHODS APPROACH TO *Understanding User Trust after Voice Assistant Failures*

Jovani Julien-Highley (816026834)

BACKGROUND

The Mixed-Methods Approach to Understanding User Trust after Voice Assistant Failures investigates how different types of voice assistant failures impact user trust, finding that failures like over capturing input and missed triggers significantly reduce trust, while trust is often rebuilt through low-stakes tasks.

Authors

- Amanda Baughan
- Allison Mercurio
- Ariel Liu
- Xuezhi Wang
- Jilin Chen
- Xiao Ma

Published in the Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI '23), held in Hamburg, Germany, from April 23-28, 2023.

METHODOLOGY

A mixed-methods approach combining interviews, surveys, and crowdsourced data was used to understand how voice assistant failures impacted user's trust.

- **Interviews:** Conducted with 12 voice assistant users to understand the types of failures.
- **Surveys:** Based on interviews and a crowdsourced dataset.
- **Usability Studies:** Conducted from user behavior and trust after experiencing failure from voice assistant.

RESULTS

User Trust and Voice Assistant Failures

- **Impact on Trust:** Wastage of users' time, over capturing, significantly deteriorate perceptions of the voice assistant's ability and benevolence.
- **Forgiveness of Failures:** Users are more forgiving of failures they understand.

User Behavior Post-Failure:

- **Continued Use:** Despite failures, users often continue using voice assistants for simpler tasks.
- **Task-Specific Trust:** Willingness of a user to use voice assistants for different tasks based on their confidence in the assistant's ability.

DISCUSSION

Understanding critical failures with voice assistance can help improve user trust and long-term engagement, as taking low-stakes tasks are crucial for rebuilding trust.

SUMMARY

The study looks at how user trust is impacted when voice assistants malfunction. Where these failures frequently stop the use of voice assistants for specific period of time, but return to use after a short amount of time, restoring confidence through basic tasks. These failures have substantially broken users' confidence in the assistant's ability. This study emphasizes the significance of correcting crucial flaws in order to boost user trust and long-term engagement with voice assistants.

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INKBRUSH: A SKETCHING TOOL FOR 3D INK PAINTING

ABSTRACT

The main objectives of this paper was to create a new sketch based 3D drawing tool for ink paintings using free-form 3D ink strokes.

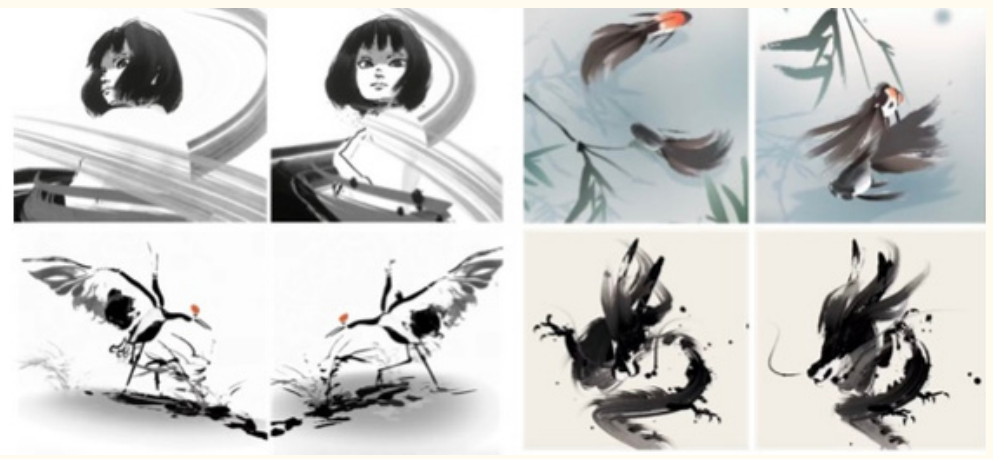
Key contributions: novel tool to create 3D ink drawings and the response of a user study evaluating the effectiveness of inkbrush.

BACKGROUND

Research paper was published on May 11th 2024 in CHI conference in human factors in computing systems.
and was created by 7 well affiliated authors.

RESULTS

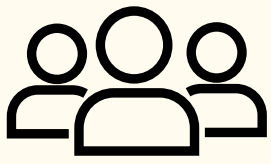
Results showed that users rated InkBrush's usability within high margins.
The creations made by focus groups users were rated by experts, most of which got high praise.



METHODOLOGY

Three qualitative methods were used

~INTERVIEWS ~FOCUS GROUPS ~QUESTIONAIRE



DISCUSSION

InkBrush's ability to facilitate 3D ink painting more effectively than existing tools while still posing some limitations, emphasizes within human computer interaction the importance of designing tools that leverage existing user expertise while introducing new innovative features.

CONCLUSION

The research addressed challenges in creating appealing 3D art and the response of the user study validated the usefulness of InkBrush and highlighted its potential to create a community of 3D art painters.

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