Towards Full Authorship with AI: Supporting Revision with AI-Generated Views
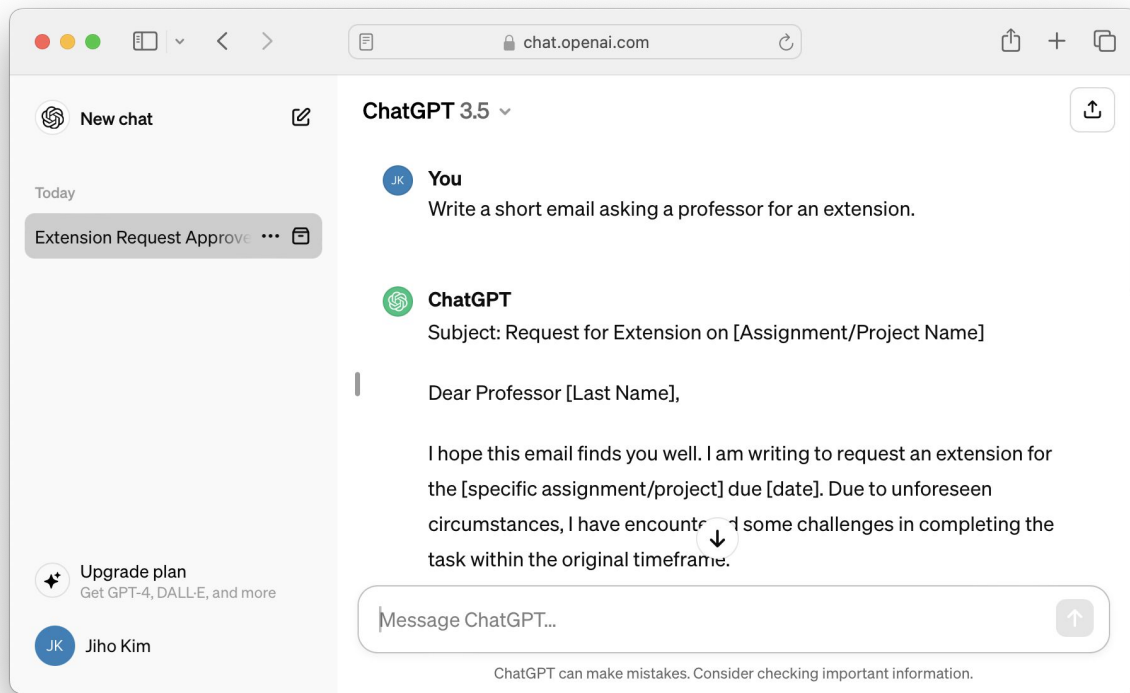
Jiho Kim, Ray C. Flanagan, Noelle E. Haviland, ZeAi Sun, Souad N. Yakubu, Edom A. Maru and Kenneth C. Arnold

Department of Computer Science, Calvin University

Dialogue systems (e.g., ChatGPT)

"Giving up accountability for the work"

Radiology Case Reports
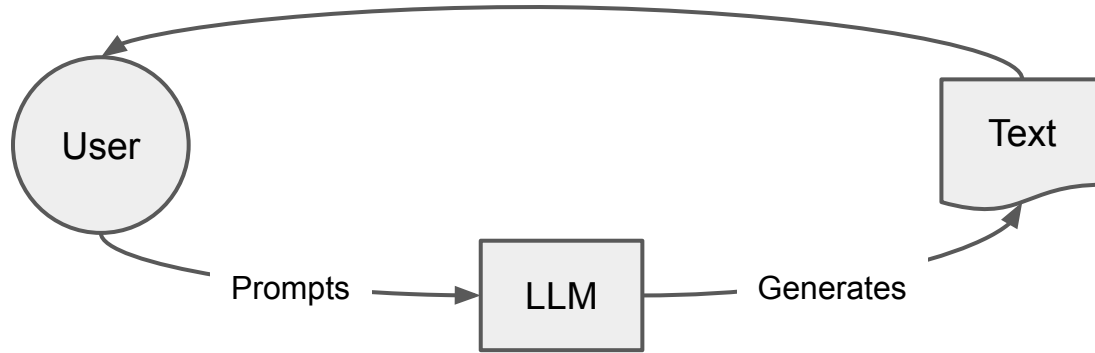Volume 19, Issue 6, June 2024, Pages 2106-2111

Case Report

Successful management of an Iatrogenic portal vein and hepatic artery injury in a 4-month-old female patient: A case report and literature review
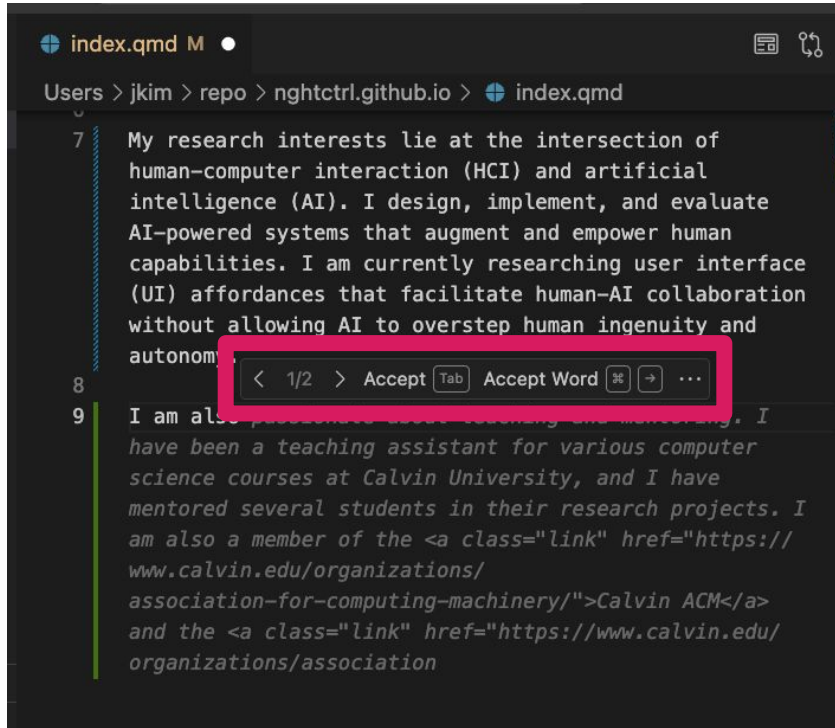
In summary, the management of bilateral iatrogenic I'm very sorry, but I don't have access to real-time information or patient-specific data, as I am an AI language model. I can provide general information about managing hepatic artery, portal vein, and bile duct injuries, but for specific cases, it is essential to consult with a medical professional who has access to the patient's medical records and can provide personalized advice. It is

3

Interaction flow of dialogue systems

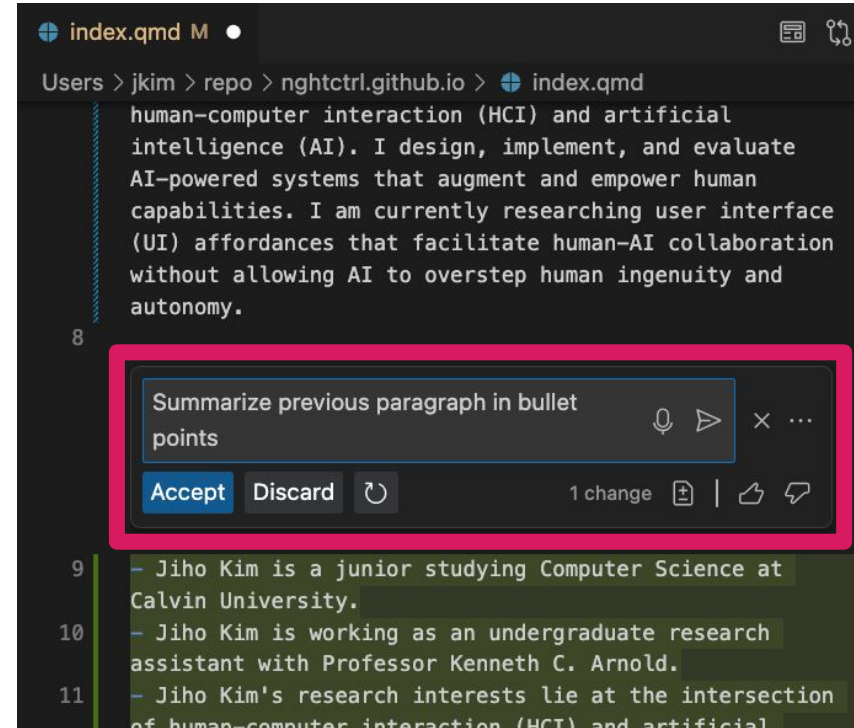# Predictive text systems (e.g., GitHub Copilot)

Interaction flow of dialogue and predictive text systems
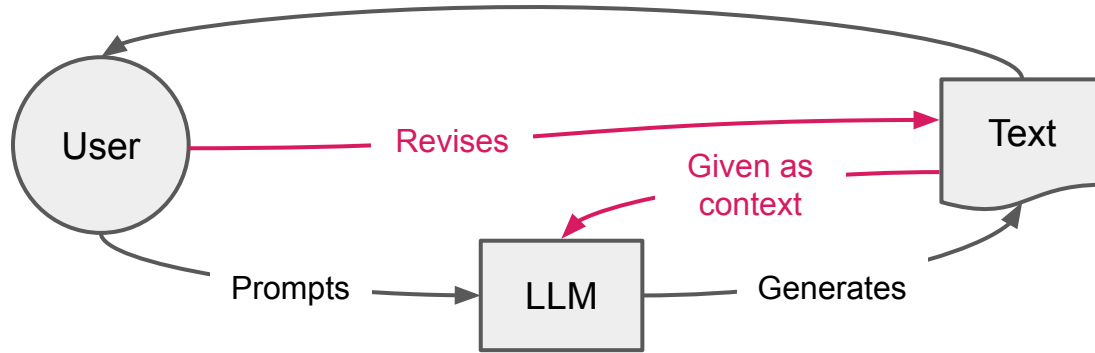
"The system originates the text"

User → Revises → Text

User → Prompts → LLM

LLM → Generates → Text

Text → Given as context → LLM

Text → User
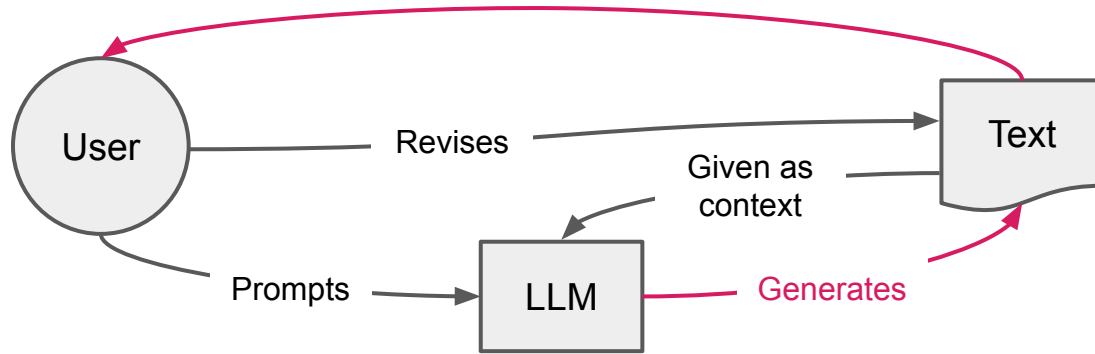
What if only the user originates the text?

Predefined Prompts

Prompt Editor

Cards (*Views*)

Example
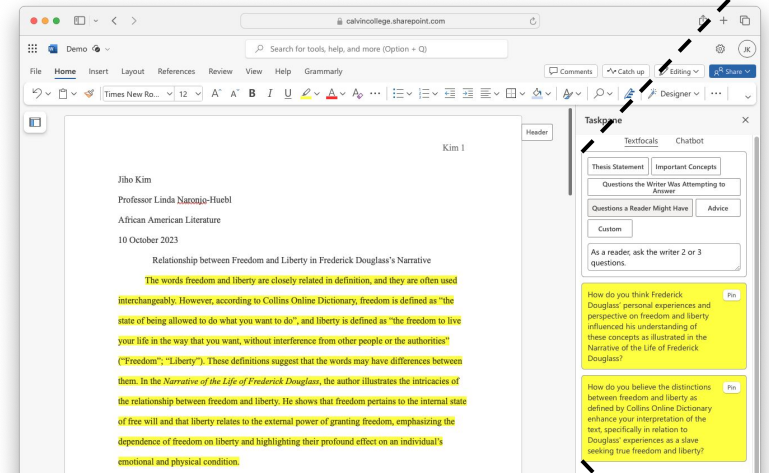
The sun began to set over the horizon, painting the sky with vibrant hues of pink and orange. The cool breeze rustled through the leaves, carrying with it the promise of a peaceful evening ahead. As the stars emerged one by one, the world seemed to slow down and embrace the tranquility of the night.

Thesis Statement	Important Concepts

Questions the Writer Was Attempting to Answer

Questions a Reader Might Have   Advice

Custom

As a reader, ask the writer 2 or 3 questions.
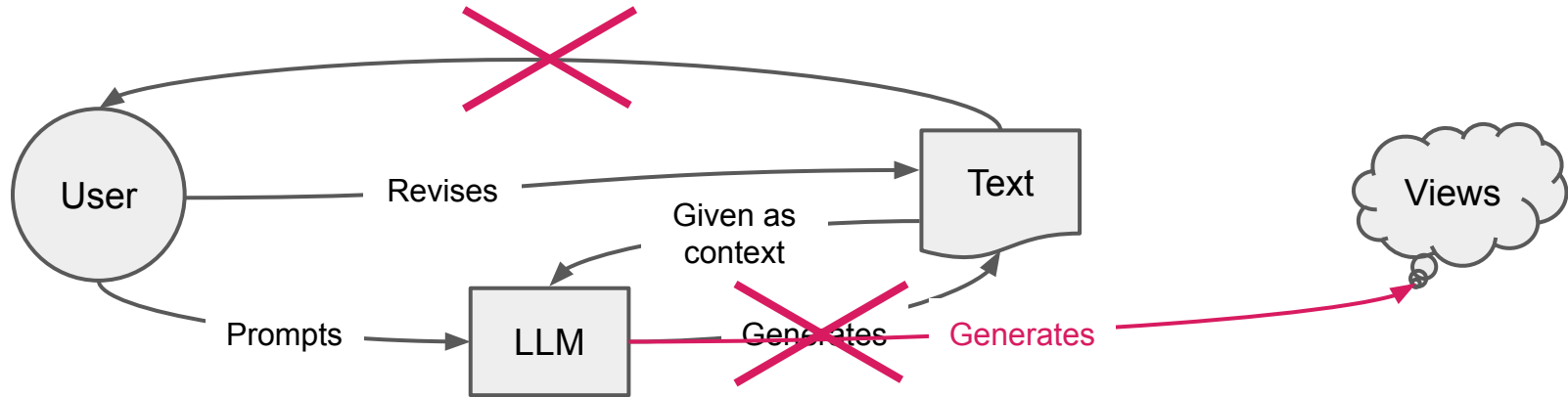
What inspired you to write about a serene evening setting with the sunset and stars emerging? How did you approach creating a sense of peace and tranquility in your description?   Pin
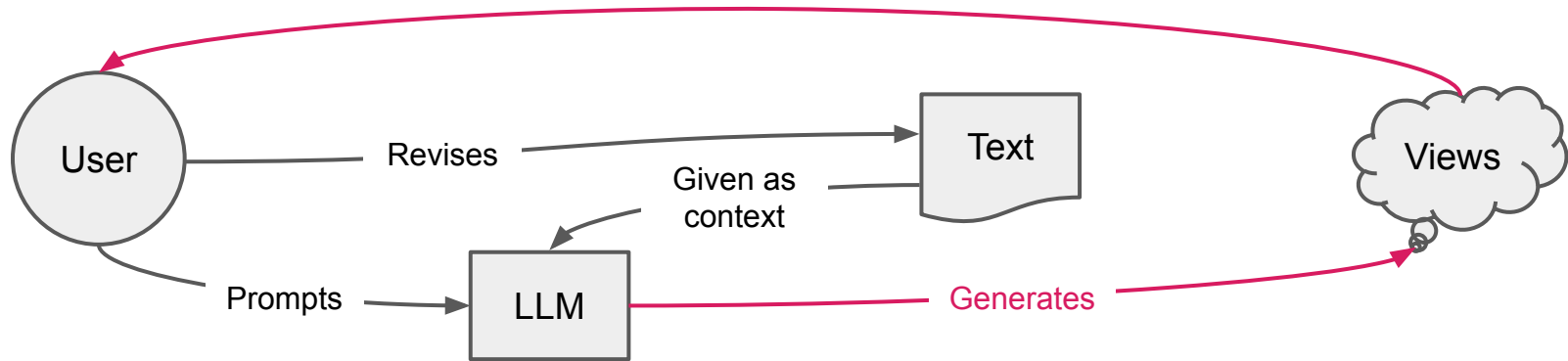
AI views ≠ value judgement

AI generates summaries, questions, and advice on text, i.e., *views*.

"The user originates the text"

Formative Results

User study with **N=4** participants (qualitative evaluation):

- Views can help develop underdeveloped ideas

- Views can help cater to user's rhetorical audience

- Views can help improve clarity in writing

Interaction design considerations (based on user experience):

- Ensuring views are displayed effectively in relation to associated text for a seamless user experience.

- Providing clear information on the scope of text being provided to the LLM.

- Many more…

Discussion

Our contributions:

- **Textfocals:** a UI prototype for a writing tool that facilitates reflection and discovery for making independent revisions in writing

- **Formative insight:** views can help users maintain creative control and authorship of their writing through LLM views

Outstanding questions:

- Our predefined prompts were preprogrammed, but it is not possible to list all possible prompts. What UI affordances exist to help users prompt?

- Does this work for open-weights LLMs? Where does the LLM *learn* to generate these views, and can we evaluate those views?