

Towards Full Authorship with AI: Supporting Revision with AI-Generated Views

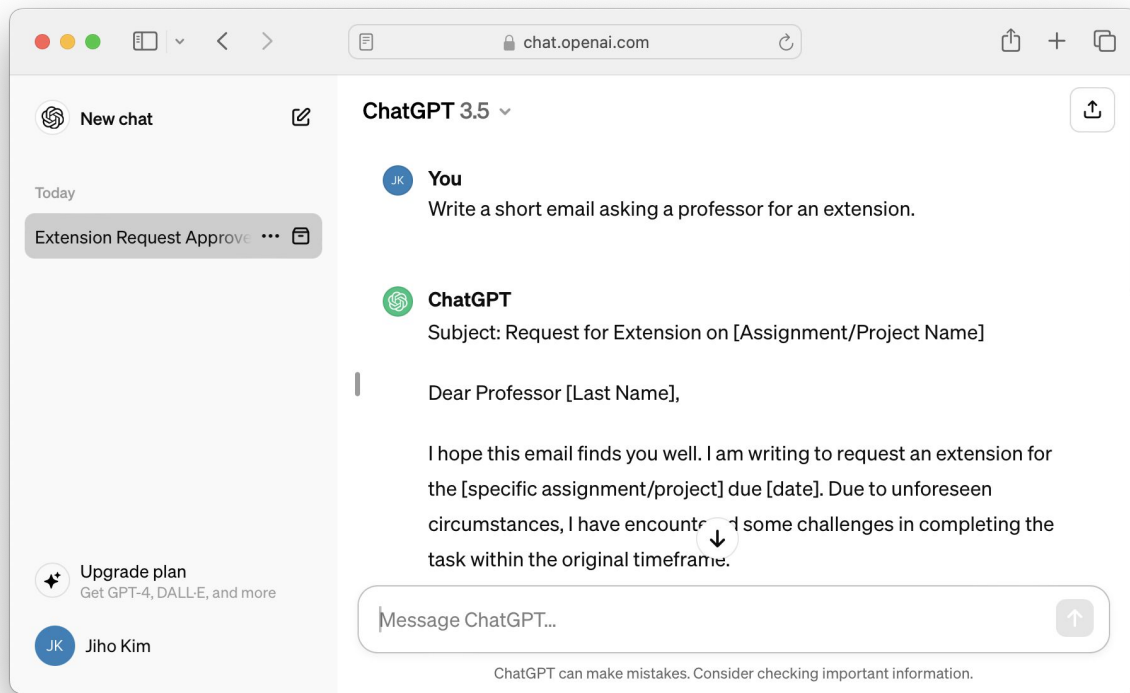
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NSF CRII award
2246145

Dialogue systems (e.g., ChatGPT)



“Giving up accountability for the work”



ELSEVIER

Radiology Case Reports
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RCR
RADIOLOGY
CASE
REPORTS

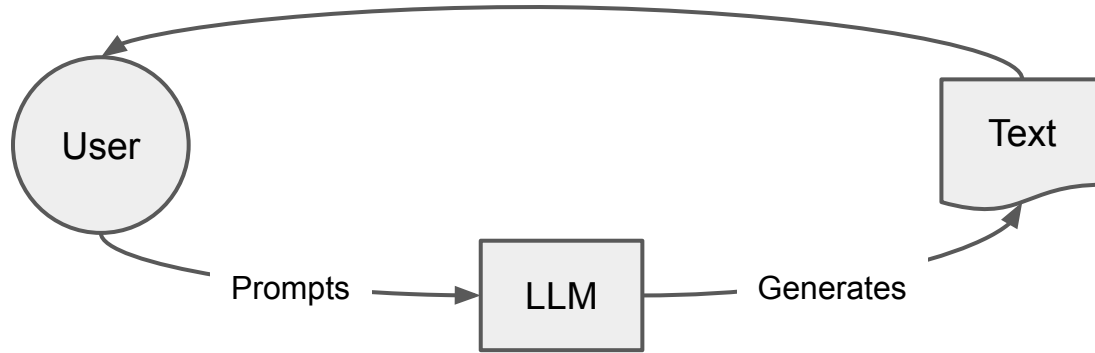
Case Report

Successful management of an Iatrogenic portal vein and hepatic artery injury in a 4-month-old female patient: A case report and literature review

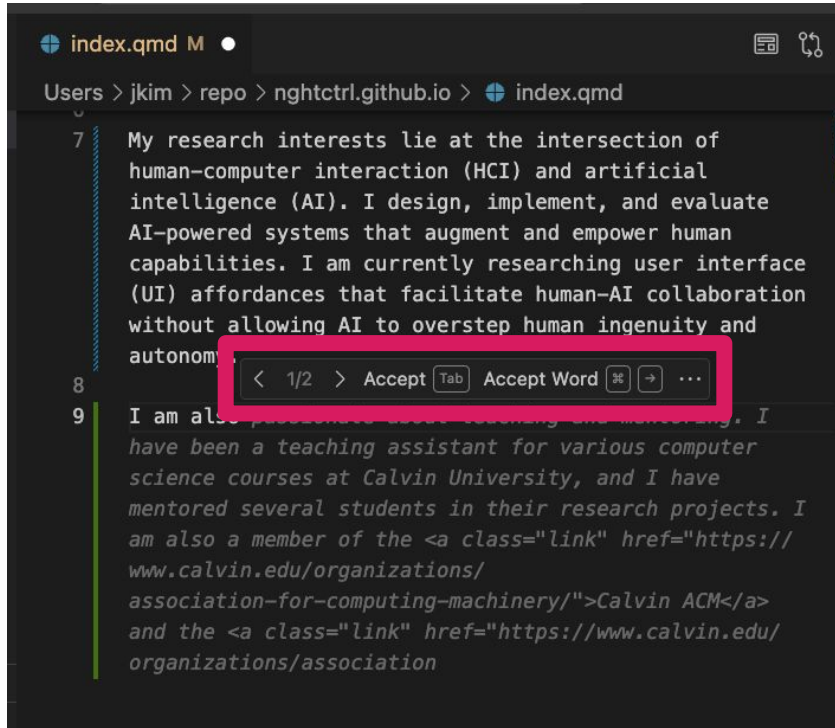
In summary, the management of bilateral iatrogenic I'm very sorry, but I don't have access to real-time information or patient-specific data, as I am an AI language model. I can provide general information about managing hepatic artery, portal vein, and bile duct injuries, but for specific cases, it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

<https://doi.org/10.1016/j.radcr.2024.02.037>

Interaction flow of dialogue systems



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

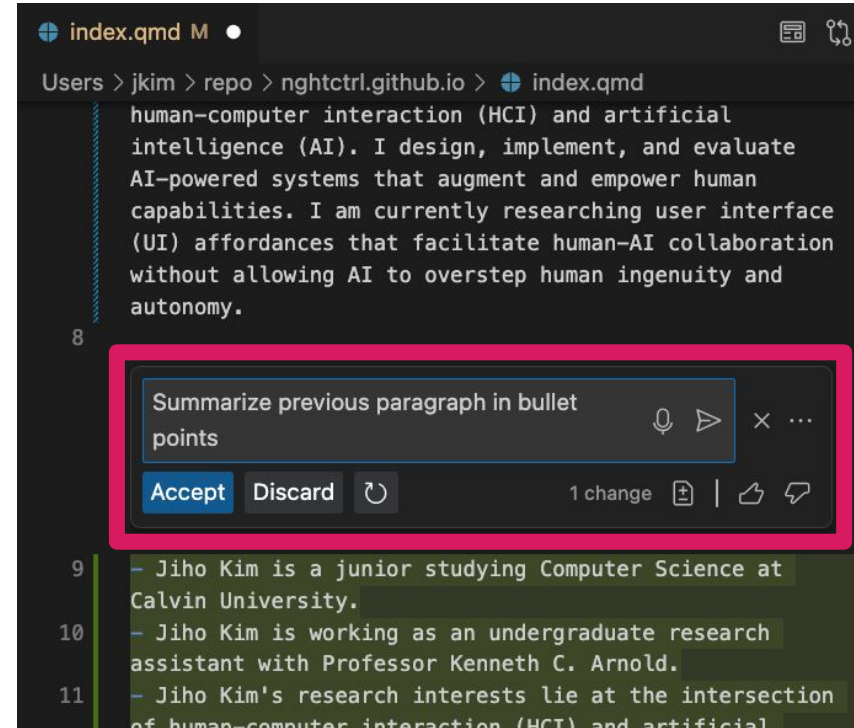


index.qmd M

Users > jkim > repo > nghtctrl.github.io > index.qmd

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7 My research interests lie at the intersection of
  human-computer interaction (HCI) and artificial
  intelligence (AI). I design, implement, and evaluate
  AI-powered systems that augment and empower human
  capabilities. I am currently researching user interface
  (UI) affordances that facilitate human-AI collaboration
  without allowing AI to overstep human ingenuity and
  autonomy.
8
9 I am also a junior studying computer science and machine learning. I
  have been a teaching assistant for various computer
  science courses at Calvin University, and I have
  mentored several students in their research projects. I
  am also a member of the <a class="link" href="https://
  www.calvin.edu/organizations/
  association-for-computing-machinery/">Calvin ACM</a>
  and the <a class="link" href="https://www.calvin.edu/
  organizations/association
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index.qmd M

Users > jkim > repo > nghtctrl.github.io > index.qmd

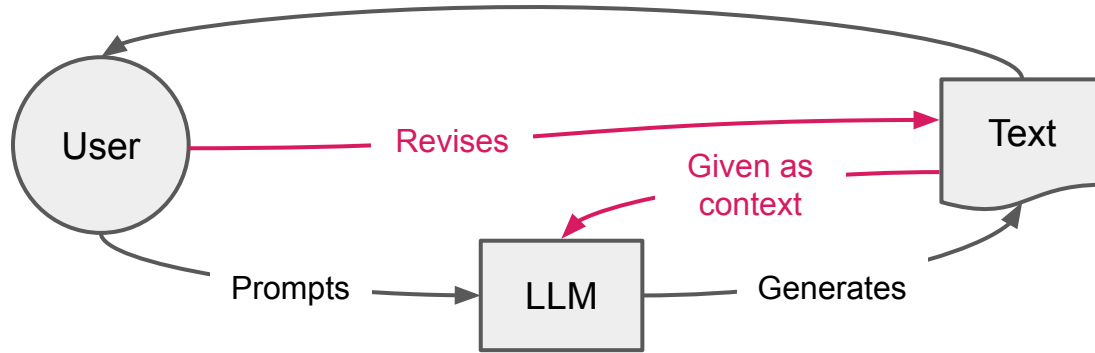
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9
10
11
```

Summarize previous paragraph in bullet points

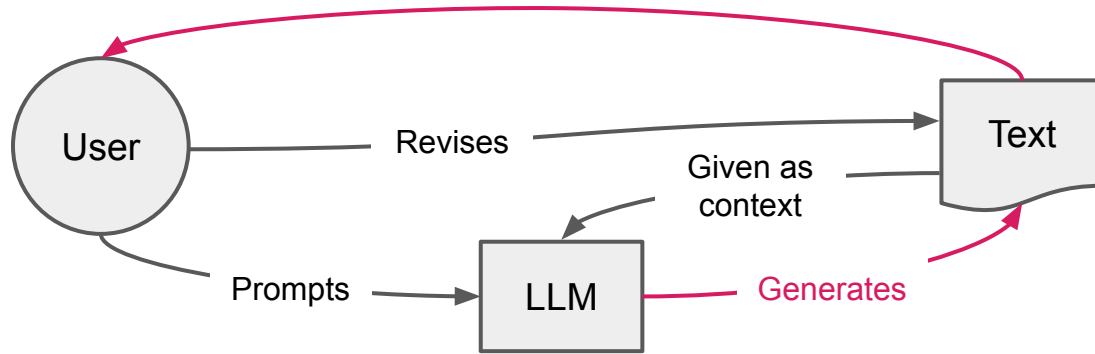
Accept Discard ↻ 1 change

- Jiho Kim is a junior studying Computer Science at Calvin University.
- Jiho Kim is working as an undergraduate research assistant with Professor Kenneth C. Arnold.
- Jiho Kim's research interests lie at the intersection of human-computer interaction (HCI) and artificial

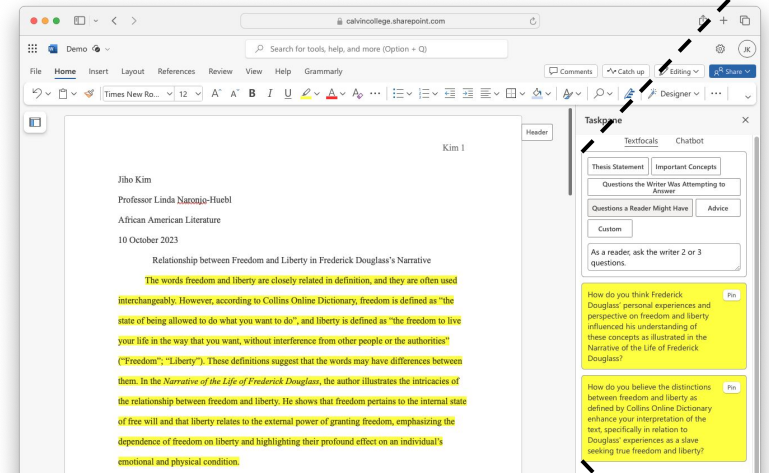
Interaction flow of dialogue and predictive text systems



“The system originates the text”



What if only the user originates the text?



Taskpane

Textfocals Chatbot

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.

How do you think Frederick Douglass' personal experiences and perspective on freedom and liberty influenced his understanding of these concepts as illustrated in the Narrative of the Life of Frederick Douglass? Pin

How do you believe the distinctions between freedom and liberty as defined by Collins Online Dictionary enhance your interpretation of the text, specifically in relation to Douglass' experiences as a slave seeking true freedom and liberty? Pin

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

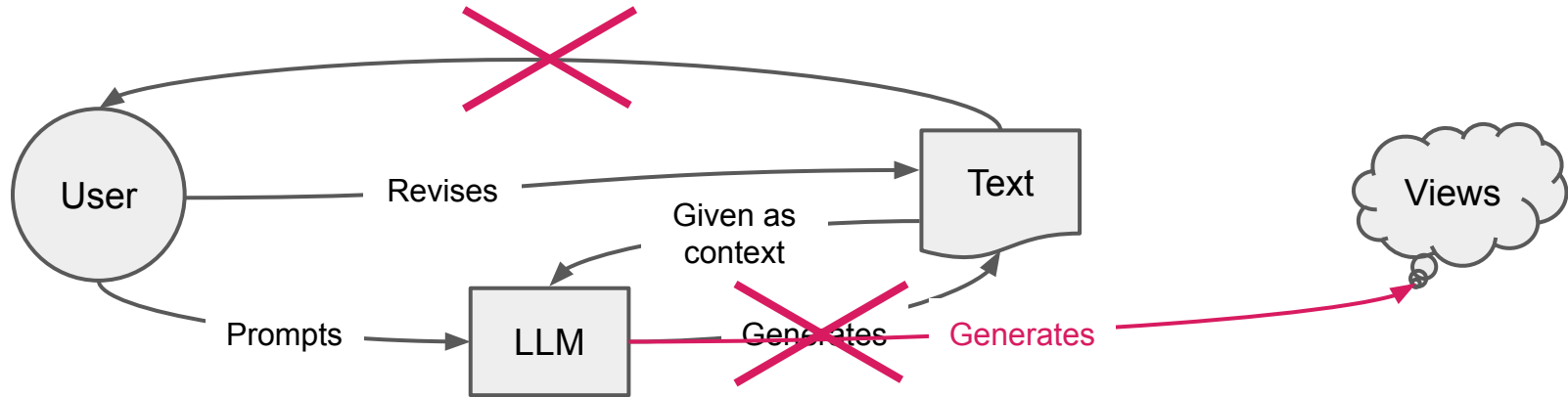
Custom

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?

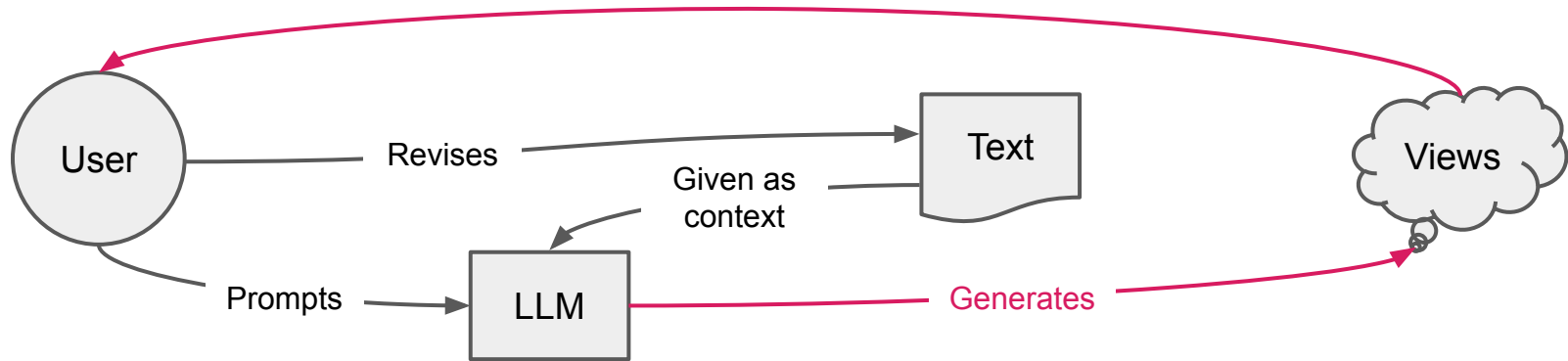
Pin

AI views \neq 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?

The screenshot shows a 'Taskpane' window with a close button (X) in the top right corner. Below the title bar, there are two tabs: 'Textfocals' (which is selected) and 'Chatbot'. The 'Textfocals' tab contains several interactive elements:

- Two buttons: 'Thesis Statement' and 'Important Concepts'.
- A text box containing the prompt: 'Questions the Writer Was Attempting to Answer'.
- Two buttons: 'Questions a Reader Might Have' and 'Advice'.
- A button labeled 'Custom'.
- A text box containing the prompt: 'As a reader, ask the writer 2 or 3 questions.' with a small icon in the bottom right corner.

Below the taskpane, there are two yellow sticky notes, each with a 'Pin' button in the top right corner:

- The first sticky note contains the text: 'How do you think Frederick Douglass' personal experiences and perspective on freedom and liberty influenced his understanding of these concepts as illustrated in the Narrative of the Life of Frederick Douglass?'.
- The second sticky note contains the text: 'How do you believe the distinctions between freedom and liberty as defined by Collins Online Dictionary enhance your interpretation of the text, specifically in relation to Douglass' experiences as a slave seeking true freedom and liberty?'.