[+1] Depth: Reflect on if you think your project makes a research contribution to HCI or another field. Incorporate a discussion of Wobbrock & Kientz's Seven Contribution Types in HCI and Fogarty's Code and Contribution

re:ad has the potential to directly contribute as an **artifact contribution to HCI,** per the definitions highlighted in *Wobbrock & Kientz Seven Contribution Types in HCI*. As per the paper outlines, artifact contributions often include the creation of new systems and tools that allow new interactions to arise that solves existing problems users face with current tools. More precisely, we were targeting the contribution that the paper mentions, which was to be able to "provide new knowledge by showing how to accomplish new things formerly impossible, **or how to accomplish formerly possible things more easily**"

re:ad was designed to address a consistent issue users face when reading and understanding academic papers, which is managing different cognitive goals, while also having the ability to bridge knowledge gaps between these different cognitive goals. By introducing a new interactive note-taking system, we hoped to propose a new way users are able to use and interact with technology to better structure and compartmentalize their thought processes when reading academic papers.

What separates re:ad from current approaches to reading academic papers, is that we aim to guide the users with a framework that explicitly encourages them to split their read with different intentions. re:ad shifts the reading experience from a linear and fragmented approach, to a more structured and intentional approach, where users are able to hone in to different intentions when reading their papers. It also provides an interface where users are set up with training wheels, as throughout their reading experience, they are supported by explanations and definitions provided by Gemini's API, reducing the barrier to entry to a lot of academic papers. Lastly, users are also able to establish user-defined links between nodes/highlights across different intentions, lessening the fragmented feel that a lot of users face when reading papers, while also providing an interaction for them to directly bridge knowledge gaps across different reading intentions.

The paper also mentions that artifact contributions are normally accompanied with **empirical contributions**, re:ad contributed empirically, as post-development, we underwent evaluations for our system, where we studied how efficient our framework was in achieving the goals we set to achieve. We conducted user interviews, where we saw first-hand how users interacted with the system, as well as their reaction to being encouraged by the interface to split their reading experience into more specific intentions. The results from this were positive, as many users felt more **intentional** and **focused** when

reading the paper, which in turn allowed them to iteratively build an understanding of the content being discussed on a deeper level .

In terms o*f Fogarty's Code and Contribution*, re:ad hopes to contribute by "including new techniques, while achieving novel functionality." We used existing technologies such as react, as well as libraries for PDF viewing, highlighting, as well as a library to manage graphs/nodes, to achieve novel functionality, which is the ability for users to structure their reading experience better, by splitting their read into specific intentions that they can focus on. The ability to also essentially construct a knowledge graph based on your highlights achieves novel functionality, as it provides a new avenue for users to visually represent their thoughts and ideas when reading academic papers.