

# CS 461: Requirement Document Activities

Prototype a web-based tool for creating and executing task-delineated, collaborative, AI-assisted assignments

## Creative Activity

Apply the C-K Theory:

1. Concept Exploration ( $C \rightarrow C$ ): Start with a broad problem or concept in your project. List unconventional, creative ideas without worrying about feasibility.
2. Knowledge Expansion ( $C \rightarrow K$ ,  $K \rightarrow K$ ,  $K \rightarrow C$ ): Research and identify new knowledge or technical resources that could support or challenge your concepts.
3. Intersection: Combine the new concepts with existing knowledge to propose innovative solutions.

1. AI chatbot, Report Generation, Assignment Creation.

2. For AI chatbots there are already tons of pre-existing models that we could use and implement, ChatGPT, Microsoft CoPilot, Google Gemini, etc. For report and assignment generation, these are also linked with AI implementation. With a bit of searching, we can use resources such as tools like piktochart or other free lance AI generation tools.

3. We can create our AI models by using and utilizing pre-existing models that can greatly improve and speedup our processes for using AI.

## Requirement Activity

User's Emotional Objectives:

- What emotions is the user seeking when using the software?
- How does the software impact their relationships or self-perception?

Submit an analysis of your project from the perspective of the user's emotional objectives, explain which user segment or audience you are targeting.

The project's audience will be targeted to two different groups, instructors and students. These two groups have very different feelings about AI based assignments and homework in general. For the instructor side, they want students to properly do assignments and gain knowledge during the process of solving problems. AI does not generally assist the process and usually is seen as a shortcut in the world of education. Our project aims to ease this worry by incorporating AI with learning so that AI may be used truly as a tool instead of a cheat. For students the emotional aspect would be utilizing AI to make work as easy as possible so that homework doesn't stress them out as much. However we wish to still keep AI so that homework moves smoothly without stress inducing assignments while also encouraging a proper mindset when interacting with AI. This would allow students to have an easier time doing homework itself, because they may use AI, without completely omitting the learning aspect.

## Planning Activity

### Definition of Done:

1. List Completion Criteria: Define specific conditions that must be met for each task or feature to be marked as "done" (e.g., all tests passed, documentation updated, code reviewed).

Since the project is based on completing a project and tool, the completion criteria is based on how functional the final product is. The criteria for the final tool would be a working functional prototype application that can successfully give a user an AI generated delineated assignment. This assignment should have a chatbot assisting the user and allow a second user to see the assignment and receive feedback via AI while being able to manually input their feedback. In summary,

- All AI portions of the project are working and able to produce desired outputs.
- Code produces a tool that can be run off of a sharable link.
- Code has been reviewed and thoroughly tested via test cases.

2. Include Quality Standards: Ensure the criteria cover quality aspects like performance benchmarks, usability, or security.

Main criteria to cover is usability and performance. The app should be easy to use while meeting the heuristics and provide a smooth experience for the user without any hiccups. As for security, it's not that important in this project as the main focus doesn't involve any use of personal information or vital info that would be harmful if leaked to the user. In summary,

- Bench marks should be that the tool runs smoothly with no faults. No crashes and run time should not be exceptionally long.
- Usability, the UI and layout should look very neat and concise, with double checking from all members.

3. Team Agreement: Discuss the definition with your team and ensure everyone agrees.

Our team has agreed on the definition of what done looks like in our eyes.