

## Technical Interview - CoT Implementation w/ multi-modal inputs

We have provided a UI implementation of a basic **chat application** in Next.js, without any functionality. At a high-level, you will implement the back-end for this chat-application, and integrate it with the front-end (we have provided resources below for the github repo, api keys, etc).

You have four steps to complete (denoted below), and as you complete each step, you will accumulate points. We will grade based on **simplicity and reliability**. Your implementation does not need to be perfect, but it does need to be **demoable to a potential client**.

After this portion of the interview, we will ask questions regarding how this application can be deployed on-prem within customer servers.

Points	Step
25	Basic LLM chat application with back-end and front-end integration.
40	Add multi-modality to enable image uploads, integrated with the provided front-end.
85	Add chain-of-thought with the existing multi-modality, integrated with the provided front-end.
100	Add responsive UI for the chain-of-thought reasoning (thinking steps similar to o1).

### Stretch Goals:

Points	Step
<b>+10</b>	Stateful Architecture (conversation history)
<b>+25</b>	Deployment to the web (any method)

### Resources

Github Link: <https://github.com/UniversalAGI/tech-interview-multi-modal-cot>

```
OPENAI_API_KEY =  
sk-proj-o_0EpHL1xR3o6Tlr7oZdF_vQ8rr3gpH6S_-euRrNQSR58EqO2xz1rX9NAxYo9pfwuY8b0H8Ty  
yT3BlbkFJ_hy-jjQ5Z3Y95rQBJGXZEXzt71-O-uksM0BdsOn-Nqyg6YclNcsMvD6gzmE5fRMizt0tq6i_0  
A
```