

Assignment: Talk to Agent

Objective

Your task is to create a simple React frontend application that allows a user to talk to a digital agent using voice. The communication takes place over a WebSocket connection to a prepared backend.

The user will record their voice and send the audio via WebSocket. The backend will respond with another audio message, which the frontend should automatically play. Both messages – sent and received – must be in `.wav` format.

The primary goal is not only to implement the basic functionality, but also to demonstrate your creativity and engineering skills in how you approach and extend the solution.

Requirements (Minimum Viable Product)

1. Voice recording – Record the user's voice using a library such as `react-audio-voice-recorder`, or a custom implementation. The recorded audio must be in `.wav` format.
2. Send audio via WebSocket – Once recorded, the `.wav` file should be sent to the backend through a WebSocket connection.
3. Receive and play audio response – The backend will respond with another `.wav` file, which should be automatically played on the frontend.
4. Basic UI – Provide a simple interface that allows the user to start and stop recording and hear the conversation as it happens.

Optional Features (Bonus)

These are not required, but will be considered positively during evaluation:

- Automatically detect when the user has stopped speaking (e.g., after a short pause) and send the recording without manual confirmation.
- Display a real-time waveform during recording (e.g., using `wavesurfer.js`).
- Any form of user feedback or visual indication during recording or playback (e.g., waveform, animation, icon, status text).
- Provide a way to view or replay previous parts of the conversation (e.g., list of audio messages with playback controls).

- Clean, modular code architecture and effective use of components and state management.
- Or anything you think is cool or interesting

Technologies

Frontend: React.js (TypeScript must be)

Recommended Libraries: [react-audio-voice-recorder](#), [wavesurfer.js](#)

Backend: [REPO](#)

Design: [FIGMA](#)

Other techstack is up to you.

Design

- Design contain:
 1. Landing page (It will be nice if you implement it)
 2. Button to open modal with call "Call Jessica"
 3. Modal with call

Time Estimate

Basic functionality: approximately 3–4 hours

Additional features (optional): up to 4–5 hours, depending on scope

Evaluation Criteria

We will evaluate the following:

- Code readability and structure
- Use of React and handling of application state
- Audio recording and playback integration
- WebSocket communication handling
- Creativity in optional feature implementation
- Overall usability and robustness

Submission

Include a short README with:

- A description of your solution
- Which features were implemented
- Any additional libraries or tools used
- Instructions for running the app locally

- Some features which you find interesting but you do not have time to implement it