External Services: openai/whisper-tiny model

Diagram explanation:

The frontend is built mainly using React and a bit of bootstrap for styling. The 3 main components (Search, Upload, View all) will render depending on the option selected by the user. Unit test is done using Jest and React testing library. Docker is used for containerization.

The backend is built using FastAPI due to its fast performance with handling file uploads and transcription tasks. Unit test is done using pytest, and Docker is used for containerization.

For the Database, SQLite is used as tasked. It is suitable for this assignment due the the native support for SQLite in python. It is also serverless which makes it easier to setup on different machines.