LessonAble Roadmap

Idea definition

1. Collection, evaluation and release of ideas related to the case of study.

2. Discussion about the ideas released.

3. Choice of the innovative idea to follow.

4. Identification of a new market and new technical solution defining **goals and expectations.**

In depth study

1. **Intensive analysis phase** in order to gather as much informations as possibile about the idea and its processing.

2. Identification of customer needs. (In this case through the experience of the professors of Federico II)

3. Evaluation of the first solution concepts.

4. Choice of the solution to be undertaken based on time and costs.

Pre-Solution Decisions

1. It has been decided to use an agile methodology to offer **an early and continuous delivery** giving priority to **customer satisfaction**, receiving feedbacks after every sprint.

2. In order to create a lesson with the client face and voice the LessonAble platform will need as inputs:

- A certain **number of videos** in which the client is present.
-A certain **number of audios** in which he reproduces texts suggested by the platform.

3. There will be two main solution implementations.

Alpha (*Faster and Raw)*: Study and implement the single components identified and combine them in a sequential manner in order to build the alpha solution.

Beta: After receiving the feedback from the alpha version, the team will focus on building a solution that no longer provides the union of the individual components in a sequential manner but will create a sort of black box. Given the inputs provided by the user, the platform will automatically generate the videolesson.

Alpha implementation

1. During the alpha version, the team will focus first on the implementation of the individual components.
The identified components are:

- **Deep fake video creation**
Models Studied:
— **First Order Motion Model**
— Inputs: Customer face;
— Outputs: Customer video based on a driving sequence.

- **Custom voice creation and usage of a Text to Speech technique in order to reproduce text with the custom voice itself.**
Models Studied:
— **Tacotron 2**
— Inputs: Text to reproduce;
— Outputs: Audio file with the Customer voice reproducing the input text.

- **LipsSyncing**
Models Studied:
— **Wave2Lip**
— Inputs:
1. Customer Deep fake video;
2. Customer Deep fake audio;
— Outputs: **Deep fake video with the lipsynced audio.**

2. Release the alpha and get feedback from the customers.

Beta implementation

1. **Collect alpha feedbacks**

WIP

Final Release

WIP