

GAN for Original media and advertising

Document Version Control

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Abstract

AI is everywhere. The time is coming when Robots and AI generated faces are replacing human beings. Same goes for media and advertising. We can make our own custom generative adversarial network (GAN) model for original media using NLP which will be there for our news anchors and also the same goes for advertising. Model should be able to imitate the text given in a text area.

1. Introduction

1.1 Why this High-Level Design Document?

The purpose of this High-Level Design (HLD) Document is to add the necessary detail to the current project description to represent a suitable model for coding. This document is also intended to help detect contradictions prior to coding, and can be used as a reference manual for how the modules interact at a high level.

The HLD will:

- Present all of the design aspects and define them in detail
- Describe the user interface being implemented
- Describe the hardware and software interfaces
- Describe the performance requirements
- Include design features and the architecture of the project
- List and describe the non-functional attributes like:
 - Security

- Reliability
- Maintainability
- Portability
- Reusability
- Application
- compatibility
- Resource
- utilization
- Serviceability

1.2 Scope

The HLD documentation presents the structure of the system, such as the database architecture, application architecture (layers), application flow (Navigation), and technology architecture. The HLD uses non-technical to mildly-technical terms which should be understandable to the administrators of the system.

1.3 Definitions

Term	Description
Database	Collection of all the information monitored by this system
IDE	Integrated Development Environment
AWS	Amazon web service

2. General Description

2.1 Problem Statements

AI is everywhere. The time is coming when Robots and AI generated faces are replacing human beings. Same goes for media and advertising. We can make our own

custom generative adversarial network (GAN) model for original media using NLP which will be there for our news anchors and also same goes for advertising.

The main objective here is :-

1. To make a model which can mimic human behavior .
2. The model should be able to read given text and other contexts.
3. Model should be able understand the sentiment of input in terms of voice, image, video etc.

2.2 Proposed Solutions

In the proposed workflow we have utilized the lipsync framework (<https://github.com/Rudrabha/LipGAN>) which will convert the text in to the video.

Steps:

- We shall have an option to enter the text
- This text shall be converted to audio
- We shall have a human picture.
- Both the audio and picture shall be given to LIPGAN framework
- Resultant video shall be return to the client

2.3 Further Improvements

Application is a little slow, This can be improved by caching the models. Also this can be upgraded using latest version of frameworks. Now the image of the person is static, this can be dynamic.

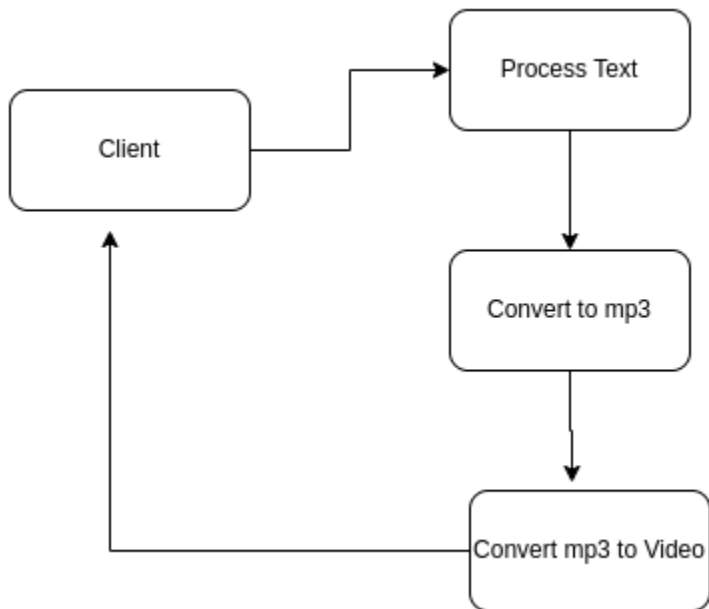
2.3 Technical Requirements

2.4 Tools Used

- Python
- LIPGAN
- gTTS
- Keras
- Tensorflow
- Visual Studio code
- Django
- Django rest framework

3.Design Details

3.1 Process Flow



3.2 Event log

We are using Django default log to log the details

Conclusion

Designed website will be able to talk based on the text given in the text area