PROJECT PROPOSAL

1. Project Title: -

AI powered video synthesis

2. Project Scope: -

1. Overview:

The project focuses on the innovative concept of synthetic video generation, aiming to transform textual explanations into engaging films by seamlessly integrating language and graphics. Leveraging cutting-edge AI methodologies, particularly Conv3D network models, we present a comprehensive system designed to convert text into dynamic video sequences. The project involves the following elements:

1. Integration of AI Techniques: Our project integrates Conv3D networks, RNNs, and attention mechanisms to synthesize videos from textual descriptions, enhancing narrative depth and visual engagement.

2. Innovative Text-to-Video Synthesis: By combining these elements, we pioneer a novel approach to text-to-video synthesis, seamlessly translating textual inputs into coherent and visually compelling video sequences.

3. Transformation of Content Creation: Demonstrating the transformative potential of AI-driven video synthesis, our system unlocks new avenues for creativity and storytelling across diverse domains, including entertainment, education, and marketing.

5. Bridging Language and Graphics: Serving as a bridge between language and graphics, our project showcases the power of AI in redefining multimedia storytelling, revolutionizing content creation and communication in the digital age.

2. **Project Goals:**

- Develop a robust text-to-video synthesis system using Conv3D networks.
- To draft a research paper on the topic text to video generation.
- Compare and enhance the accuracy and performance of various networks.
- Explore versatile applications across entertainment, education, marketing, and communication domains for synthesized video content.

3. **Constraints:**

- The research paper should be submitted by the end of the even semester (4th semester).
- A literature review must be conducted to acquire background information within currentknowledge on the topic.
- The research paper must outline the way of collecting data.
- The research paper must follow academic writing conventions.

4. **Assumptions:**

- The initiative will improve the functioning of AI in generating media material.
- Assumption of text descriptions sufficiently representing desired video content.
- Assumption of model's ability to generalize across diverse textual inputs.
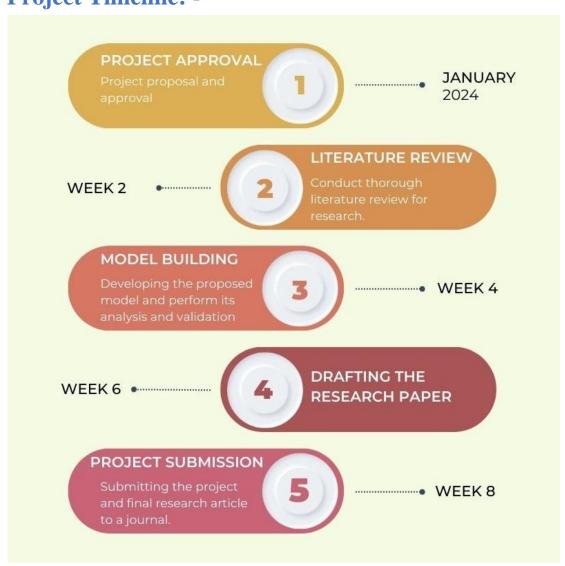
3. Requirements: -

Hardware Requirements:
1. 11th Gen Intel® i7-11800H @ 2.30GHz
2. 16 GB RAM
3. 256GB SSD + 1TB HDD

<u>Software Requirements:</u>

- Python 3.x
- Github
- PyTorch
- Torchsummary
- Opencv
- Tqdm
- Imageio
- Numpy
- Peft
- Matplotlib

4. Project Timeline: -

PROJECT APPROVAL
Project proposal and approval
1 .... JANUARY 2024

LITERATURE REVIEW
Conduct thorough literature review for research.
WEEK 2 2

MODEL BUILDING
Developing the proposed model and perform its analysis and validation
3 .... WEEK 4

DRAFTING THE RESEARCH PAPER
WEEK 6 4

PROJECT SUBMISSION
Submitting the project and final research article to a journal.
5 .... WEEK 8

STUDENTS DETAILS

Name	UID	Signature
Rhishitha T S	21BCS6272	
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Rashaz Rafeeque	21BCS6634	

APPROVAL AND AUTHORITY TO PROCEED

We approve the project as described above, and authorize the team to proceed.

Name	Title	Signature (With Date)
Prof. Merry K. P	AI powered video synthesis	