Project Proposal

**2024-25**

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| **Team Details** | | | | |
| **S.No** | **University Roll Number** | **Name** | **Email** | **WhatsAppNumber** |
| **1\*** | 2161170 | Harshit Waldia | [Harshitwaldia112@gmail.com](mailto:Harshitwaldia112@gmail.com) | +91-7060546501 |
| **2\*** | 2161311 | Shivam Sah | [Shivamsah156@gmail.com](mailto:Shivamsah156@gmail.com) | +91-7037473282 |
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| **Project Details** | | | | |
| **Title:** SynthiVerseAI : Cross-Modal Creative Synthesis System | | | | |
| **Technologies to be used:**   * TensorFlow/PyTorch * Transformers, VariationalAutoencoders(VAEs) * GenerativeAdversarialNetworks(GANs) * NaturalLanguageProcessing(NLP) * AudioProcessing * 3DConvolutionalNetworks * DataPreprocessingPipelines | | | | |
| Brief Description of the Project (Point-wise):   1. **Cross-Modal Content Generation:**    1. **Text-to-Image Generation:**  * Develop a custom model to generate images from textual descriptions. Focus on traditional image synthesis techniques that translate text into visual representations.   **1.2. Text-to-Audio Generation:**   * Build a custom model to generate audio tracks from text prompts, concentrating on straightforward sound synthesis methods.   **1.3. Text-to-Video Generation:**   * Implement a custom architecture, such as temporal GANs or 3D convolutional networks, to produce video content from textual inputs using standard techniques.  1. **Real-Time Content Adaptation:**    * Implement real-time adaptation features that allow users to interact with and modify the generated content dynamically. This includes adjusting styles, themes, and other parameters interactively.    * The system will ensure that the generated text, images, audio, and video are harmoniously aligned with the provided prompt or theme. 2. **User-Friendly Interface:**    * Design an intuitive interface that allows users to input prompts and customize their multimedia content easily. The interface will include features like sliders, previews, and customization options to improve the user experience. | | | | |
| **Whether compared with any existing system: (Give URL /link or citation) : No** | | | | |
| **Whether discussed with any Faculty Member (NAME): Dr. Ankur Singh Bist** | | | | |
| **Whether proposed work is extension of internship work: No** | | | | |
| **Any previous work with proposed technologies: Yes** | | | | |
| **Whether crude DFD/ ERD are prepared: No** | | | | |

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| **Planning Details (Aug-24 to May-25)** | | |
| **Phase** | **From** | **To** |
| Literature Survey | Aug 2024 | Sep 2024 |
| Design | Sep 2024 | Oct 2024 |
| Implementation-1 | Oct 2024 | Dec 2024 |
| Implementation-2 | Jan 2025 | Feb 2025 |
| Implementation-3 | Mar 2025 | Apr 2025 |
| Testing | Apr 2025 | May 2025 |
| Submission | 15 April 2025 | |

**WORK DISTRIBUTION PLAN**

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| PROJECT ID: - | | | TEAM LEADER : - HARSHIT WALDIA | | |
| PROJECT TITLE: - SynthiVerseAI : Cross-ModalCreativeSynthesisSystem | | | | | |
| S.No | MODULE NAME(S) | FUNCTIONALITIES | | TECHNOLOGIES USED | TEAM MEMBER |
| **1.** | Text-to-Media Generator | Convert textual descriptions into | | TensorFlow / PyTorch, Transformers, Variational Autoencoders (VAEs),  Generative Adversarial Networks (GANs), Natural Language Processing (NLP), Audio Processing, 3D Convolutional Networks, Data Preprocessing Pipelines | Harshit Waldia |
|  |  | corresponding text,images, | |  |
|  |  | audio, and video. | |  |
| **2.** | Text-to-audio Generator | Convert textual descriptions into corresponding audio description | | Natural Language Processing (NLP), Audio Processing, 3D Convolutional Networks, | Shivam Sah |

The above-mentioned students shall be working under the supervision of the undersigned on the

“SynthiVerse AI: Cross-Modal Creative Synthesis System”

Signature

Supervisor

Internal Evaluation (By DPRC Committee)

**Status of the Project Proposal:** Accepted / Rejected

Any Comments:

Name of the Committee Members: Signature with Date

1.

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