HiParly - Interactive 2D Avatar Animation with Real-Time Audio and Text Input

HiParly is an AI-powered language learning app that focuses on helping users practice real-life conversational skills in six different languages. Our mission is to make speaking a new language more accessible, engaging, and practical.

Project Overview

This IDP focuses on implementing real-time 2D avatar generation using both speech audio and text input. The project aims to create a dynamic and interactive avatar that can simulate real conversations by adjusting its expressions, lip movements, and gestures in response to both audio and textual cues.

Key Tasks & Goals

Literature Review

- Conduct a literature review on existing methods and technologies related to audio-driven talking face generation, text-based avatar animation, and real-time synchronization.
- Use the findings to inform the project's development, ensuring it builds upon and enhances existing techniques.

Avatar Animation and Synchronization

- Develop algorithms for processing speech audio and text input to extract features like pitch, intonation, phonemes, and contextual cues.
- Use extracted audio and text features to animate a 2D avatar in real-time, ensuring accurate lip-sync and dynamic expression changes that reflect conversational tone and content.
- Ensure the algorithms run efficiently in real-time, minimizing latency for smooth interaction.

Skills Required

- **Programming Languages**: Python or C++
- **Frameworks**: Experience with TensorFlow, PyTorch, or similar libraries
- **Computer Vision**: Experience in developing algorithms for facial recognition, gesture tracking, and synchronization of animations.
- **Audio and Text Processing**: Familiarity with audio processing for speech feature extraction and text processing for enhancing avatar interaction.
- **Teamwork & Communication**: Ability to work collaboratively, share ideas, and troubleshoot issues.

What We Offer

- **Cutting-Edge Technology**: Work on a real-world project at the intersection of AI, computer vision, audio and text processing, and animation.
- **Hands-On Experience**: Gain experience with audio and text-driven avatar generation, crucial skills in the AI and tech industries.

- **Mentorship & Support**: Receive guidance from HiParly's co-founder.
- **Startup Experience**: Get a first-hand look at what it's like to work in a fast-paced startup environment focused on innovative technology.

Why This Project?

This project offers students a unique opportunity to develop their skills in computer vision and animation while working on a real-world application. Your work will directly influence the user experience of our AI-powered language learning app by making it more interactive and engaging. You will have the chance to explore cutting-edge techniques in facial recognition, gesture tracking, and real-time rendering, all while working with a motivated and supportive team.

How to Apply

If you are interested in this exciting opportunity to be part of a dynamic startup, please send your **CV** and a brief **email** outlining your interest in this project to **gunes@hiparly.com**

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