**Title :-** MindSync Smart Glasses: AI-Driven Memory Enhancement

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**ABSTRACT:-**

An **innovative AI-powered eyewear solution** seamlessly transforms regular glasses into **smart glasses** by integrating an **ESP32-CAM**. This technology enables the glasses to capture images every 5 minutes from the user's perspective, creating a hands-free, continuous record of daily activities. Each image is processed using **Optical Character Recognition (OCR)** algorithms to generate text summaries, which are stored in a **vector database** for future retrieval. By leveraging **Retrieval-Augmented Generation (RAG)**, users can effortlessly query past events with simple questions like, “What was I doing on [date, day, and time]?” The **LLM model** then retrieves and synthesizes relevant text-based summaries from stored image data, offering a seamless way to recall past moments.

This project enhances human memory by seamlessly combining computer vision, natural language processing (NLP), and machine learning techniques to provide personalized and contextual insights. The use of a vector database ensures efficient search and retrieval of information, even for complex, time-sensitive queries. As a potential future enhancement, GPS tracking and advanced recognition features (e.g., facial or object detection) could further enrich the user experience. This innovative wearable technology aims to revolutionize memory augmentation, providing users with an intuitive, real-time interface for recalling and reflecting on past events.