Blink Detection Method for Real-Time Face Detection

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Abstract: *In recent years, secure authentication methods have become increasingly vital as digital interactions grow. This project presents a novel blink detection method integrated with face detection for real-time secure authentication. By leveraging the natural blinking behavior of users, the system enhances biometric security, making it difficult for unauthorized users to gain access. The approach utilizes a combination of computer vision techniques and machine learning algorithms to accurately identify and track user faces while detecting blinks. The proposed system is designed to operate efficiently on standard hardware, ensuring low latency and high reliability. Experimental results demonstrate that our method significantly improves authentication accuracy compared to traditional face recognition systems, providing a robust solution for secure access in various applications. This project explores an innovative approach to account security and authentication by leveraging blink detection for real-time face identification. As digital security threats escalate, traditional password and biometric systems face vulnerabilities. Our method utilizes advanced computer vision algorithms to detect and analyze eye blinks as a unique biometric identifier, ensuring that the user is actively present during authentication. By integrating blink detection for face recognition, we aim to enhance security measures while maintaining user convenience. The system is designed to operate efficiently in various environments, providing a robust solution for secure access to sensitive accounts and applications.*

Keywords: Blink detection, Face detection, Real-time authentication, Biometric security, Computer vision, Machine learning, User authentication, Security systems, Digital interactions, etc