

Fit Mentor AI

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Abstract: *Fitness and health are vital components of modern lifestyles, and technology has increasingly contributed to improving personal fitness routines. "Fit Mentor AI" is an innovative project that leverages artificial intelligence (AI) and machine learning (ML) to monitor and analyze exercise form using a device's camera. By detecting and tracking key body points, the system evaluates posture, alignment, and movement to provide real-time corrective feedback, reducing the risk of injury and improving workout efficiency. Unlike traditional fitness apps, which require manual input or pre-recorded videos, "Fit Mentor AI" uses pose estimation algorithms to provide data-driven insights. This project is designed to make fitness coaching accessible, affordable, and effective, bridging the gap between users and professional trainers.*

Keywords: Exercise Form Correction, Human Pose Detection, Body Movement Analysis, Real-Time Feedback System

