

PitchPerfectAI_Biomechanics Project

Github link: https://github.com/Olubayode/PitchPerfectAI_Biomechanics

This is my ongoing project, which I considered to be a groundbreaking tool that utilizes AI algorithms to interchange biomechanics animations at the pitch level. This system allows for real-time monitoring, analysis, and performance enhancement for pitchers. The tool meticulously tracks key metrics such as arm angles, shoulder rotation and speed, distance of arm angles from the ground and kinetic sequences, providing instant alerts when a pitcher deviates from established normative ranges. This not only improves performance but also safeguards the well-being of players. Additionally, it will also generate the player datafile generator, a comprehensive analytical tool that compiles a player's biomechanical data over specified periods. This feature generates detailed reports in various formats, including CSV, PDF, and Excel, offering invaluable insights for players and coaches alike. These abilities and expertise will contribute to the biomechanics programs of the organization.

Here is the link to the sample video of my Pitcher AI tracker:

<https://drive.google.com/file/d/1nIYUYtXlGcGWQN8ubB8X-JOhoLiMk7w7/view?usp=sharing>

Sample CSV Data FILE:

https://drive.google.com/file/d/18kx_cZFB7Q8zjeqMo6ik08dlzBg_Qh3V/view?usp=sharing

Project is still on going as I am working on Tracking when the Release phase of the pitcher to know when the ball leaves the pitcher hand.