Posture Corrector With Pose Estimation

Project Name: Posture Corrector With Pose Estimation

Project Type: Computer Engineering Undergraduate Program 4nd Semester Project of Engineering Project II Course

Project Team:

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Project Purpose: The purpose of this project is to help people while exercising. Program can detect your body parts and their angles, and give to you feedback.

Project Outputs:

There are two type output in this project, these are:

History: User can see own exercise history.

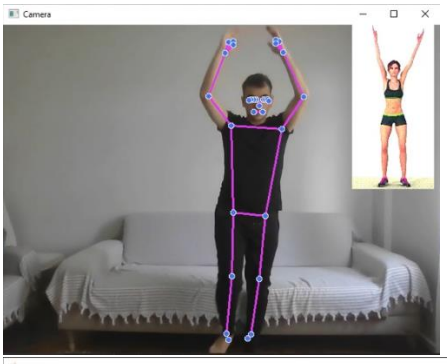
- Exercise dates,sets, and repeats.
- This information save in .txt file.

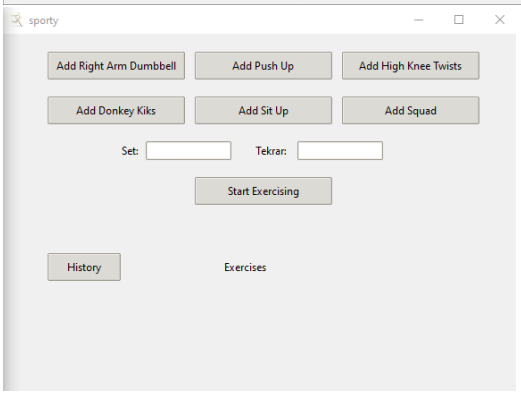
Exercise Information: While exercising, user control own exercise information.

- Total set and repeat for the specific exercise move.
- Current state of exercise move.
- Angles of related with exercise move.
- Color changing and voices, related with angle corrections information.

Tools Used:

- PyCharm Community v2023.3
- Python 3.10.11
- Time: Built-in Python Package
- Numpy: 1.24.2
- Mediapipe: 0.9.1.0
- Tkinter: 8.6
- pygame: 2.4.0
- cv2(opencv): 4.7.0.72





Areas for Development:

- Frontend part can be better.
- For accuracy, number of conditions improve.
- The program can implement to other devices.

Commercialization Potential:

- This system can sell to any sport complex or publish on web markets.
- By integration physiotherapy, the application can use at hospitals or home.