BSDP, 당신의 운동 파트너

opensource final project

김찬형, 김하람, 민찬호, 윤세준

CONTENTS

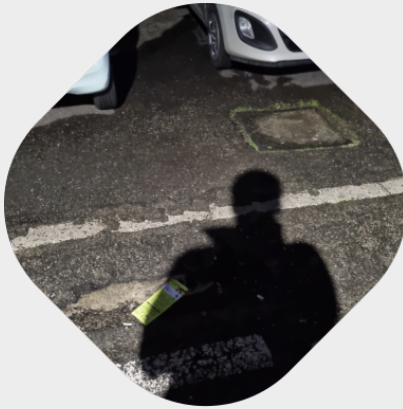# 01. TEAM ROLE

김찬형

Main Code Implementation
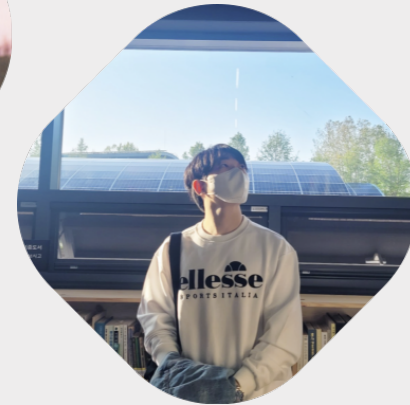Interface Code Implementation

김하람

Interface XD Design
Interface Code Implementation

민찬호

Main Code Implementation
Icon Design

윤세준

Reference Research
Interface Code Implementation

BSDP

Your Health Partner

- INTRODUCTION:
  Automatic exercise measurement and accuracy feed back program of BDS for health workers.

- Function :
  - Present recommended exercise for beginners
  - Correct exercise posture by checking user's exercise posture error
  - Measure the number of wrong exercise pose
  - Notify exercise accuracy

03. WHICH OPENSOURCE

Numpy

WHAT: Python libraries that help facilitate processing for matrices or large multidimensional arrays in general.
HOW: Make the coordinates of each node in to a numpy arrangement and calculate the angel using an arctangent.
LICENSE: Apache License 2.0

OpenCV

WHAT: A programming library aimed at real-time computer vision
HOW: Visualize data received from webcam in connection with mediapipe.
LICENSE: modified BSD License

Mediapipe_pose

WHAT: Libraries that provide solutions for live and streaming media.
HOW: Get the coordinate value of the node and use the learned pose data.
LICENSE: modified BSD License

PyQt5

WHAT: Framework that allows you to create a GUI program by connecting Python's code to the layout of Qt.
HOW: Interface design and connection between interface code functions.
LICENSE: GPL 3.0 or the RiverBank Comercial License

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3. Patent application, private use.
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[Duties to reveal the source code]
NO

[Constraints]
LOW

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[Possible activities]
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2. Distribute and editable.
3. Patent application, private use.

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[Constraints]
HIGH

05. MILESTONE

-11/15 — **01**
- User analysis and exercise program research
- Import body tracking data and modify code from mediapipe - pose
- Get real-time webcam imforamtion and output webcam data using openCV

11/16-11/24 — **02**
- Measure the angle of each node using the angle calculation function.
- Calculate the angle of the node required for each exercise selected by the user and visualize the angle using the conditional statement.
- Interface design.

11/25-12/3 — **03**
- Collect data and set the standard posture and error range to create success pose data.

05. MILESTONE

12/4-12/9   **04**   - Measure the total number of exercise and fail number of exercise by evaluating the user's exercise posture according to the standard posture
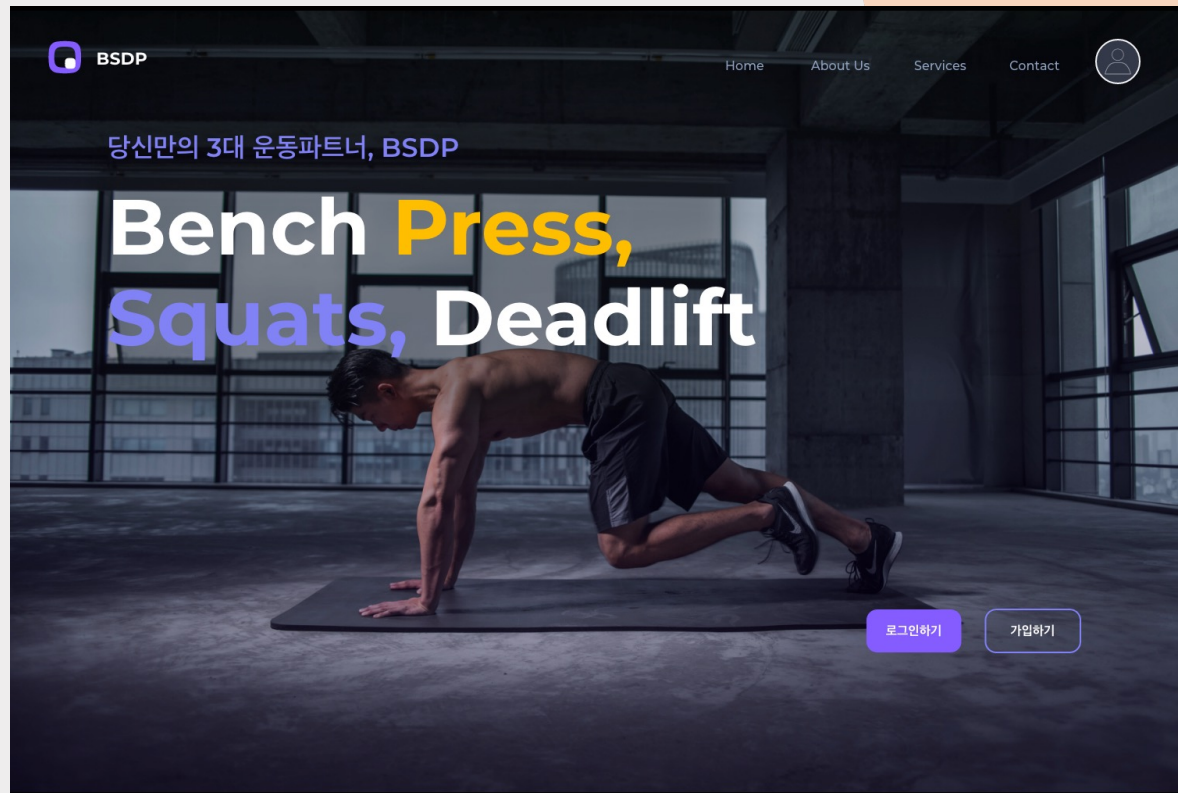
12/10-12/18   **05**   - Implement an interface.

BSDP

FINAL DEMO VIDEO

Thank you !
감사합니다.