

ChatGPT 실험과 활용방안 보고서

# AI personal exercise coach



- 경북대학교 컴퓨터학부 우성현

# 1. 주제 소개 - ChatGPT를 통해 운동 처방이 가능한가?

## 1) 주제 선정 이유

- 컴퓨터 공학을 전공하기 전 트레이너로 몇 년간 근무
- ChatGPT는 얼마나 구체적인 운동 처방 및 지도가 가능한가?
- 값비싼 고용비용을 지불해야하는 개인 트레이너를 인공지능이 대체할 수 있을까?

## 2) 테스트 진행 방식

- 특정 체형 문제와 관련된 교정 운동 질문(round shoulder, anterior pelvic tilt)
- 답변으로 제시된 운동 처방과 관련된 유튜브 영상 추천
- 특정 체질(살이 잘 찌지 않는)과 관련된 해결방법
- muscle hypertrophy 프로그램 추천
- 일 주일 단위 상세한 운동 루틴 계획

## 3) 테스트 결과

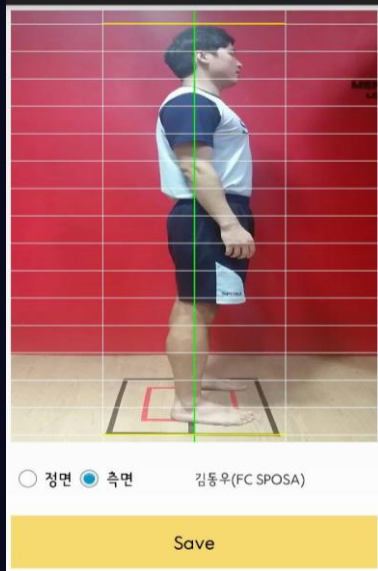
- 교정 운동 및 특정 체질, 특정 운동 프로그램에 대한 상세한 답변 가능
- Language model이라 인터넷 브라우저나 유튜브와 같은 외부 리소스에 대한 접근 불가
- 다른 인공지능 API와 결합한다면, 어느정도는 트레이너를 대체할 수 있을 것이 기대됨



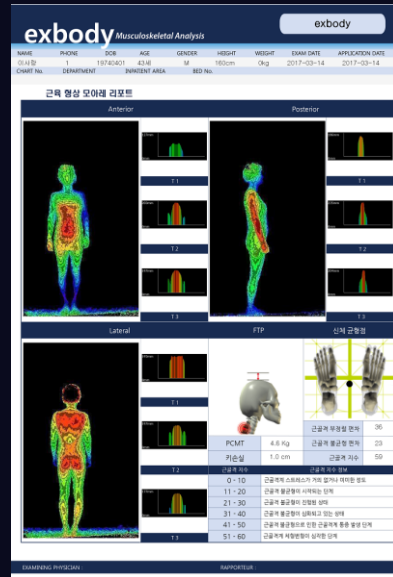
## 2. 향후 활용 방안 - AI personal exercise coach app

: 개인 맞춤 운동 코치 앱으로 체형 및 신체 기능을 측정하고 인공지능을 통한 분석을 통해 문제점과 필요한 운동과 식단을 처방해주며, 실시간 운동 피드백을 제공한다.

### ① 체형 및 기능 검사



### ② AI 분석



### ③ ChatGPT 운동 및 식단 처방



### ④ YOUTUBE API





### 3. 실험 결과-①

성현

I worked as a fitness trainer for several years, and now I'm majoring in computer science. What kind of developer would I like to be?



As a computer science major and a former fitness trainer, you likely have a unique set of skills and experiences that can be valuable in a variety of developer roles. Some possible developer roles you might be interested in include:



1. Mobile app developer: You could use your background in fitness training to develop apps that help people track their workouts, set fitness goals, and find exercise routines.
2. Web developer: You could use your computer science skills to build websites for fitness businesses or organizations, or create online tools and resources for people interested in fitness.
3. Data scientist: You could use your analytical skills and understanding of human behavior to analyze and interpret data related to fitness and health.
4. Software engineer: You could use your technical skills to develop software solutions for a variety of industries, including the fitness industry.

Ultimately, the type of developer you want to be will depend on your interests and goals. Consider exploring different developer roles and finding one that aligns with your passion and strengths.

### 3. 실험 결과-②

성현

I have round shoulders. What corrective exercises should I do?



Round shoulders, also known as "hunched shoulders" or "forward head posture," occur when the shoulders roll forward and the neck and head jut out. This posture can be caused by various factors, including poor posture habits, muscle imbalances, and underlying medical conditions.



To correct round shoulders, you can try the following exercises:

1. Chest stretch: Stand with your arms behind your back and interlace your fingers. Lift your arms up and back, stretching your chest muscles. Hold for 20-30 seconds and repeat 2-3 times.
2. Shoulder blade squeeze: Sit or stand up straight and squeeze your shoulder blades together. Hold for 5 seconds and release. Repeat 10-15 times.
3. Upper back extension: Lie on your stomach with your arms by your sides. Lift your head, chest, and arms off the ground, arching your back. Hold for 5 seconds and release. Repeat 10-15 times.
4. Scapular retraction: Stand or sit with your arms by your sides and your palms facing forward. Squeeze your shoulder blades together and draw them down towards your hips. Hold for 5 seconds and release. Repeat 10-15 times.

It's important to consult with a healthcare professional before starting any new exercise program, particularly if you have underlying medical conditions or injuries. They can help you determine the cause of your round shoulders and develop a safe and effective exercise plan to address them.

### 3. 실험 결과-③

성현

Do you have a link to a YouTube video related to the above?



I apologize, but as a language model, I do not have the ability to browse the internet or access external resources such as YouTube videos. However, there are many instructional videos on YouTube that can demonstrate the exercises I have mentioned. You can try searching for "chest stretch," "shoulder blade squeeze," "upper back extension," and "scapular retraction" to find instructional videos that can show you how to perform these exercises correctly.



It's always a good idea to seek guidance from a qualified fitness instructor or healthcare professional before starting any new exercise program. They can help you ensure that you are performing the exercises correctly and safely.

### 3. 실험 결과-④



I'm not good at gaining weight. I want to grow in size, how do I do that?



If you want to gain weight and increase your size, it's important to focus on both your diet and your exercise routine. Here are some tips that may help you achieve your goal:



1. **Eat more calories:** To gain weight, you need to consume more calories than you burn. Aim to add an extra 250-500 calories to your daily diet, depending on your age, gender, weight, and activity level. Choose nutrient-dense foods, such as lean proteins, healthy fats, and complex carbohydrates, to support muscle growth and overall health.
2. **Eat more frequently:** Eating smaller, more frequent meals throughout the day can help you consume more calories and provide your body with a steady supply of nutrients.
3. **Incorporate strength training:** Strength training exercises, such as lifting weights or using resistance bands, can help you build muscle mass and increase your size. Aim to strength train 2-3 times per week, using a combination of compound exercises (e.g., squats, deadlifts, bench press) and isolation exercises (e.g., bicep curls, tricep dips).
4. **Get enough protein:** Protein is an essential nutrient for muscle growth and repair. Aim to consume 0.7-1 gram of protein per pound of body weight per day. Good sources of protein include meat, poultry, fish, eggs, dairy products, beans, and legumes.
5. **Get enough rest:** Adequate sleep is important for muscle recovery and growth. Aim for 7-9 hours of sleep per night to give your body time to repair and rebuild.

It's always a good idea to consult with a healthcare professional or a registered dietitian before making any significant changes to your diet or exercise routine. They can help you develop a safe and effective plan to help you reach your goals.

### 3. 실험 결과-⑤



I have an anterior pelvic tilt. Please tell me about corrective exercise.



Anterior pelvic tilt is a common postural imbalance in which the pelvis tilts forward, causing the lower back to arch and the buttocks to stick out. This posture can lead to muscle imbalances and increase the risk of back pain and other musculoskeletal issues.



To correct anterior pelvic tilt, you can try the following exercises:

1. Pelvic tilts: Lie on your back with your knees bent and feet flat on the ground. Tighten your abdominal muscles and tilt your pelvis towards your chest, pressing your lower back into the ground. Hold for a few seconds and release. Repeat 10-15 times.
2. Cat-cow stretch: Start on your hands and knees with your wrists under your shoulders and your knees under your hips. Inhale and round your spine, tucking your chin towards your chest (cat pose). Exhale and arch your back, looking up towards the ceiling (cow pose). Repeat 10-15 times.
3. Plank: Start in a push-up position with your hands under your shoulders and your body straight from head to heels. Hold this position for 30 seconds, maintaining a neutral spine and engaging your core muscles.
4. Bridge: Lie on your back with your knees bent and feet flat on the ground. Lift your hips off the ground, squeezing your glutes and engaging your core muscles. Hold for a few seconds and release. Repeat 10-15 times.

It's important to consult with a healthcare professional before starting any new exercise program, particularly if you have underlying medical conditions or injuries. They can help you determine the cause of your anterior pelvic tilt and develop a safe and effective exercise plan to address it.



### 3. 실험 결과-⑥



Please recommend an exercise program for muscle hypertrophy



Muscle hypertrophy refers to the process of increasing the size of muscles through exercise and nutrition. To promote muscle hypertrophy, it's important to incorporate both strength training and adequate protein intake into your exercise program. Here is a sample exercise program that you can try:



1. Warm up: Start each workout with a 5-10 minute warm-up, such as light cardio or dynamic stretches. This will help increase blood flow to your muscles and reduce the risk of injury.
2. Strength training: Incorporate a variety of strength training exercises into your workout routine, focusing on compound exercises that target multiple muscle groups at once (e.g., squats, deadlifts, bench press). Aim to perform 3-4 sets of 8-12 repetitions of each exercise, using a weight that allows you to reach muscle fatigue by the end of each set.
3. Rest and recovery: Allow your muscles time to recover between workouts. Aim for at least 48 hours of rest between strength training sessions for the same muscle group.
4. Nutrition: Consume an adequate amount of protein to support muscle growth and repair. Aim for 0.7-1 gram of protein per pound of body weight per day. Good sources of protein include meat, poultry, fish, eggs, dairy products, beans, and legumes.

It's always a good idea to consult with a healthcare professional or a registered dietitian before starting any new exercise program. They can help you determine the best approach for your specific needs and goals.

### 3. 실험 결과-⑦



Plan the strength training workout routine above on a weekly basis.



Sure! Here is a sample weekly strength training routine that incorporates the exercises and principles I mentioned above:



Monday:

- Warm up: 5-10 minutes of light cardio or dynamic stretches
- Strength training:
  - Squats: 3 sets of 8-12 reps
  - Bench press: 3 sets of 8-12 reps
  - Deadlifts: 3 sets of 8-12 reps
  - Bicep curls: 3 sets of 8-12 reps
  - Tricep dips: 3 sets of 8-12 reps

Wednesday:

- Warm up: 5-10 minutes of light cardio or dynamic stretches
- Strength training:
  - Lunges: 3 sets of 8-12 reps (per leg)
  - Shoulder press: 3 sets of 8-12 reps
  - Lat pulldowns: 3 sets of 8-12 reps
  - Leg press: 3 sets of 8-12 reps
  - Leg curls: 3 sets of 8-12 reps

## 4. 이미지 출처

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- <https://enoumen.com/2022/12/12/what-is-google-answer-to-chatgpt/>

### < 2 page >

- [https://bravo.etoday.co.kr/view/atc\\_view/12136](https://bravo.etoday.co.kr/view/atc_view/12136)

### < 3 page >

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- <http://www.charmbone-os.com/46>
- <https://www.weetechsolution.com/blog/what-is-openais-chatgpt-and-how-can-you-use-it>
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- <https://www.youtube.com/watch?v=OGbzHp6XHjU>