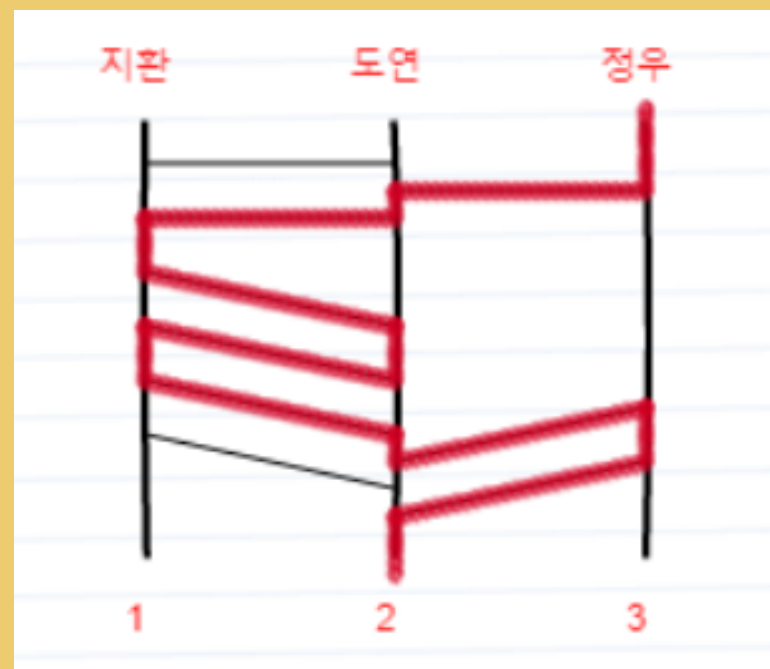


Adding Diet Management to Fitness App

IT INVESTMENT ANALYSIS

Kim Doyeon Kim Jihwan Yeom Jungwoo Aurelia Valencia

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01

I. Title

We decided to develop an **AI trainer app by adding diet management.**

II. Motivations

Our motivation for selecting this topic is increasing interests on health managements nowadays and providing much more healthy experience to customers who use trainer apps. These days, more and more people are interested in self-care and self-control and also many kinds of fitness apps are coming out. We can record our meals by ourselves in many different apps but there are few apps providing detailed diet programs. These issues are became our main motivations.



01

III. Goals and Objectives

What are your major goals of your project?

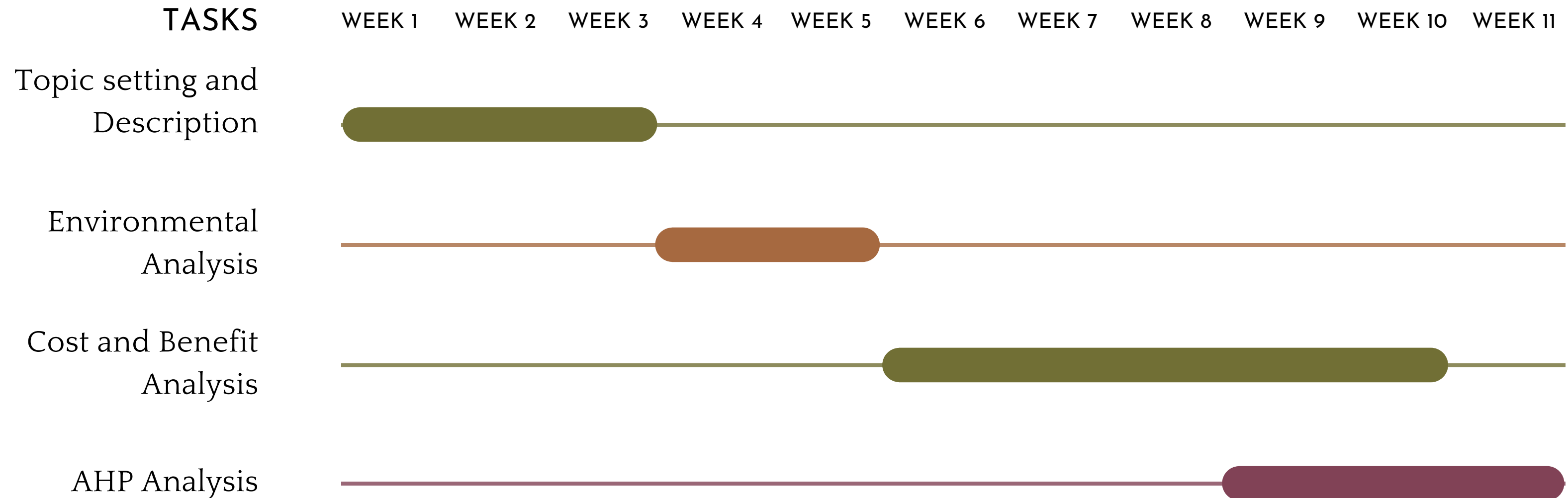
As we mentioned at the previous slide, we are thinking about to add diet management program to the fitness app. We are going to provide new diet service that can suggest the personalized program to individuals. It will automatically calculate calories that the customer has to take according to the customer's physical information so it can provide the program to individuals. In addition, it can also record customer's meal more exactly by AI food lens which can analyze the nutritional ingredients of the meal.

What do you expect to learn from your project?

Through this project, we would like to understand a detailed and step-by-step set of procedures and methodologies for IT investment decision-making and to develop executive capabilities for IT investment evaluation.

01

IV. Project Schedule



I. ITEM

1. Item Description

1. Analysis of food photos:

When you take a picture, AI quickly analyzes the ingredients of food and accurately provides nutritional ingredients such as protein, carbohydrates, and fats. Users can also quickly check the calorie information of each food.

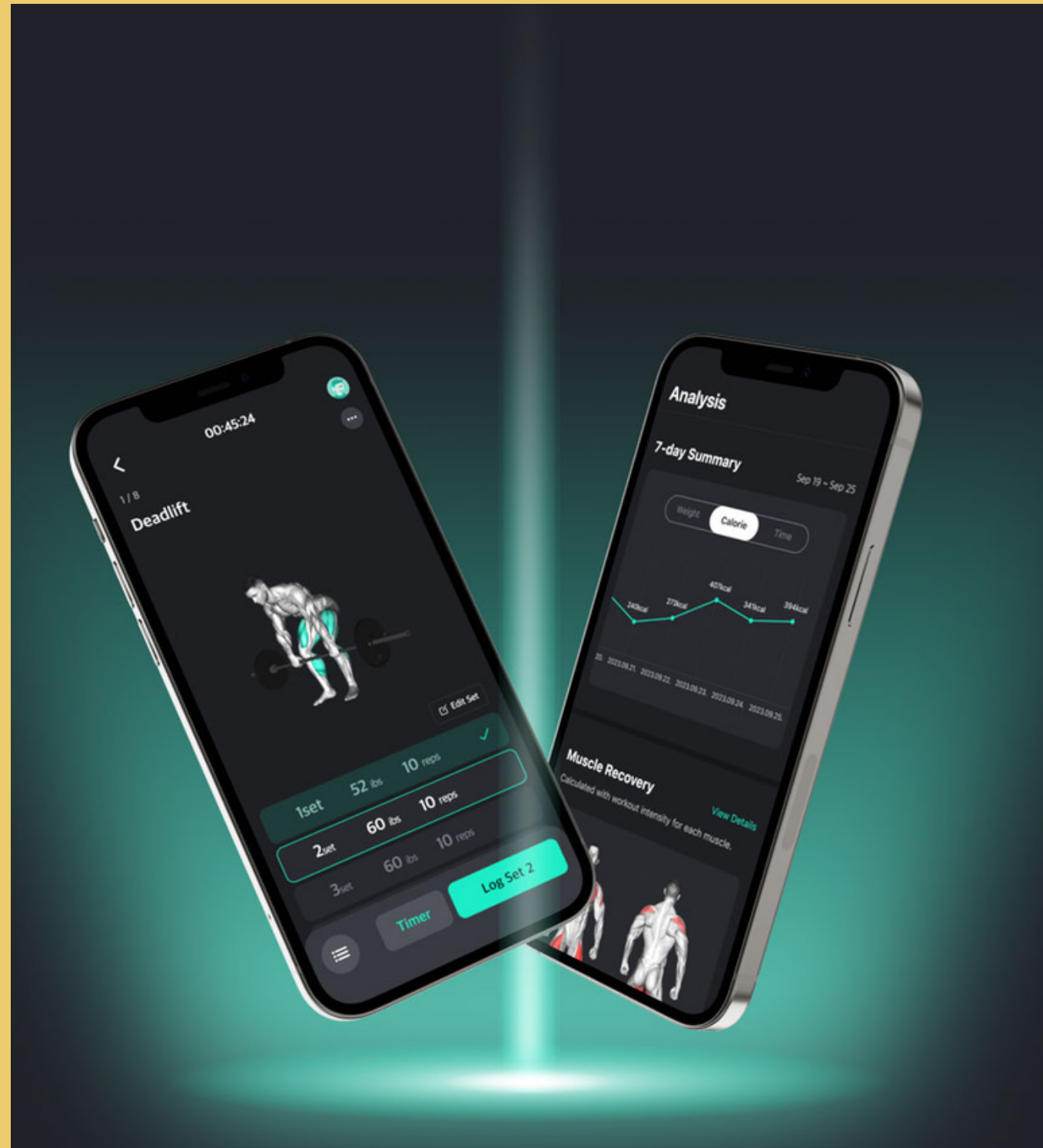
2. Customized Diet Recommendations:

We'll recommend a customized diet based on the user's personal physical information, activity level, and goals. It helps users reach their goals by considering nutritional recommendations.

3. Nutritional ingredient tracking:

Users can easily track their daily intake of nutrients in the app. Graphs and statistics allow you to visually check your nutritional status

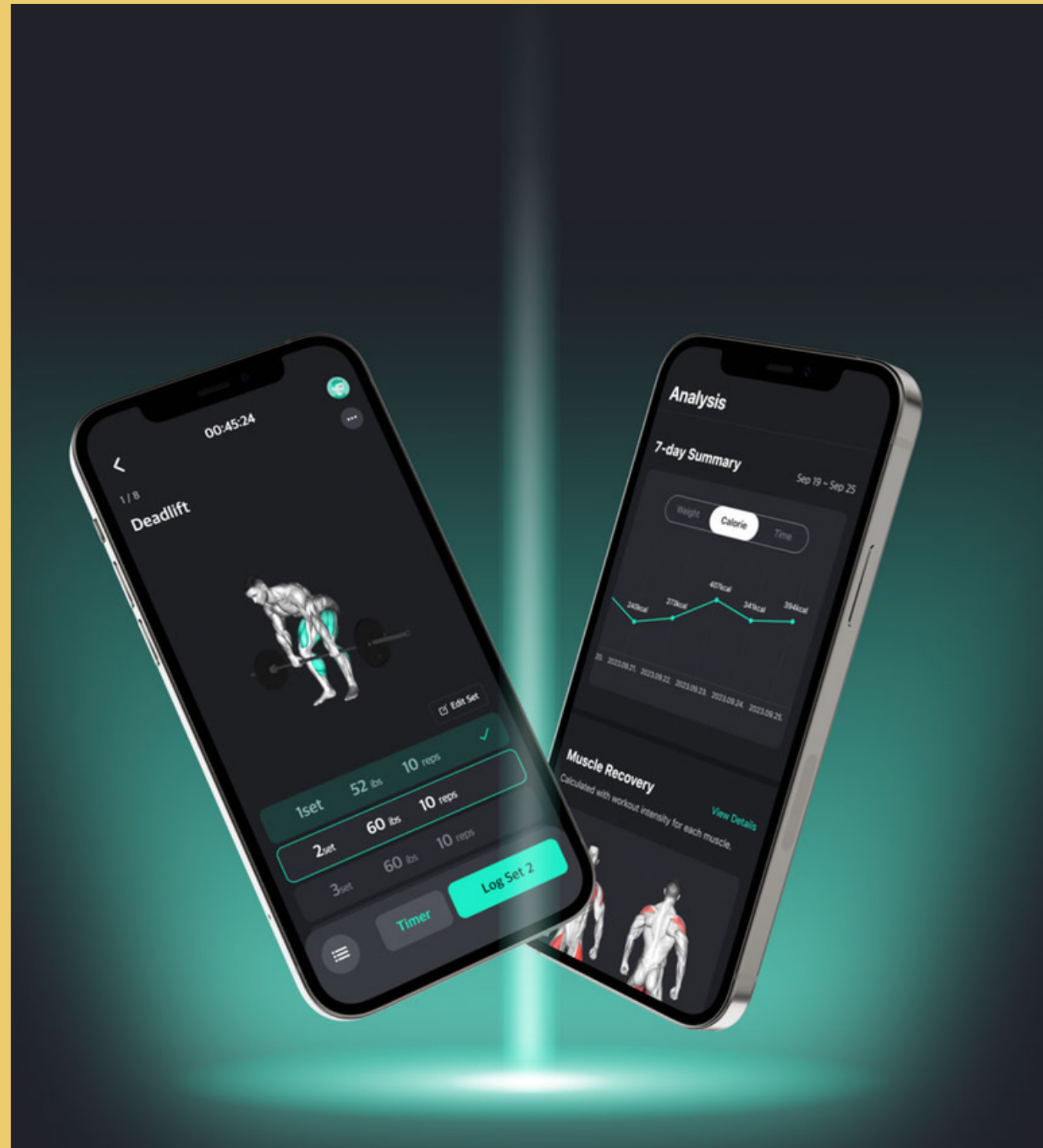
02



2. Perspective in the analysis - (supplier's perspective)

- Improved user experience:
The new diet management features make the application more attractive by providing users with a rich experience.
Personalized diet recommendations will help users achieve their goals, leading to high satisfaction.
- Boost market competitiveness:
The health and fitness application market is competitive, and new features can improve the company's market competitiveness.
Providing nutritional information and customized diet recommendations can provide more value to users, which will help maintain existing users and acquire new users.

02



2. Perspective in the analysis (supplier's perspective)

- Customized marketing and collaboration opportunities:

Utilizing users' diet management data can open up opportunities for cooperation with food companies or fitness brands.

Based on this data, the company can maximize revenue through customized marketing and affiliate activities.

- Maintain users and increase loyalty:

Customized diet recommendations encourage users to continue using the application, which contributes to increasing user loyalty.

Continuous improvements and updates drive users to continue using the application and increase trust in the brand

02

3. Technologies adopted

AI food photo recognition function:

If you take a picture of the food you eat and send it to the app, the ai analyzes the picture and calculates the calorie and nutrient ratio, and shows it. This feature makes it easier for users to prepare their own diets to suit their personal preferences, and makes it easier to calculate the calories they consume per day without cumbersome registration of recipes.

Gahyeon Noh, Ingyeong Yun, & Dong Ho Kim (2020.11). 머신러닝 기반 사진인식 기술을 활용한 다이어트 AI. 한국방송미디어공학회 학술발표대회 논문집,



02

4. Current Status and Future Prospects in the Item and Technology

	CURRENT STATUS	FUTURE PROSPECTS
ITEM (adding diet management feature)	<ul style="list-style-type: none">• Workout overview• Body status analysis• Workout performance analysis• Workout statistics	<ul style="list-style-type: none">• Provide perzonalised meal plans• Analyze the nutritional content of diet through photos of food
TECHNOLOGY	Smart belt that collect real time data AI video analysis	Food analysis AI program (Food Lens)

II. Market - Customer Analyses

Basically, our target customers are gym and fitness application users.

According to '국민생활조사' institution (2019), 13.4 percent of South Koreans use gyms. Divided by academic background, the participation rate of those with university graduation or higher is the highest at an average of 19%. The participation rate by age is 25.8% for 20s, 23.8% for 30s, and 17.7% for 40s. By gender, 19.4% of male and 7.8% of female go gym. And the higher the income, the higher the participation rate.

Gym

학력별	초졸이하	52.7	0.9
	중졸	38.5	4.0
	고졸	40.3	10.1
	대졸(4년제 미만)	22.7	15.0
	대졸(4년제 이상) 대학원 이상	20.1 15.4	24.4 18.9
성별	남자	24.1	19.4
	여자	40.4	7.8
연령별	10대	18.2	2.9
	20대	13.5	25.8
	30대	23.1	23.8
	40대	30.6	17.7
	50대	35.9	7.9
	60대	45.1	6.9
	70세 이상	66.6	1.7
소득별	100만원 미만	64.6	3.0
	100~150만원 미만	67.2	1.4
	150~200만원 미만	62.1	3.0
	200~250만원 미만	56.2	7.3
	250~300만원 미만	41.6	7.8
	300~350만원 미만	41.9	9.2
	350~400만원 미만	34.3	11.1
	400~450만원 미만	32.7	14.7
	450~500만원 미만	17.2	23.7
	500~550만원 미만	24.4	15.1
	550~600만원 미만	23.5	16.7
	600만원 이상	14.2	18.6

II. Market – Customer Analyses

Additionally, our target customers are diabetes patients and potential diabetes patients. Diabetes is managed and prevented by healthy eating, maintaining a balanced weight through regular exercise

According to the Diabetes Fact Sheet in Korea released by the Korean Diabetes Association, in 2020, there were approximately **6 million diabetes patients** aged 30 and above in Korea. Considering that in 2010, the number of diabetes patients was 3.2 million, this represents an increase of nearly double in the span of 10 years. Taking into account the population at risk for diabetes pre-stages, approximately **15.83 million people are potentially at risk**, indicating that over 20 million Koreans are either affected by diabetes or at risk. In 2020, among all diabetes patients, **individuals aged 65 and above accounted for 39.2%**, with particularly notable rates among females aged 65 and above, where over half (51.2%) are affected by diabetes.

02

II. Market - Customer Analyses

Lastly, our target customers are individuals who are obese.

According to the Korea Disease Control and Prevention Agency (KDCA), The obesity rates varied across genders and age groups, with males showing an overall higher obesity rate (40.2%) compared to females (22.1%). Among males, the highest obesity rate was observed in the 30s age group (51.4%), while among females, it was most prominent in the 70s age group (30.6%). These findings indicate distinct patterns of obesity concerning gender and age brackets.

구분	전체	남자	여자
전체	32.5	40.2	22.1
20대	27.7	38.8	15.5
30대	35.8	51.4	19.0
40대	34.1	48.1	19.7
50대	31.5	40.1	22.7
60대	30.1	33.0	27.6
70대	29.3	27.9	30.6
80대 이상	20.7	18.7	22.0

▲ 2022년 성·연령대별 비만율(출처: 질병관리청)

02



Works with
Apple Health

myfitnesspal



2. Competitors Analyses

According to the online public health resource, more than 97,000 fitness and health apps and The number of downloads per year amounts to 2.5 billion(2021).

The most popular app is Apple Health. It is an app that iPhone users can basically use, and it can be easily linked to Apple Watch. It collects health information from devices, sets medication reminders and organises health records.

MyFitnessPal is a popular app in the United States that includes a database of nutritious foods and fitness segments. This app has 200million users (as of 2022) Finally, Spotu is a company that is currently developing an app that is the almost same as our topic.. An app named 'PT쌤' has been created and will support the ai video analysis function. Several wearable devices are also on sale.

II. Market – Market Analyses

The global fitness market size was valued at USD 1,21 billion in 2021(straits research site report). The report said that it projected to reach USD 5.41 billion by 2030, registering a CAGR of 18.1% from 2022 to 2030.

According to Sensor Tower, a global mobile market data analysis company, revenue from in-app purchases of mobile health and fitness apps worldwide topped \$2.8 billion in 2022, a record high. From 2019 to 2021, revenue growth reached 43%, 50%, and 33%. In addition, as self-management has become an essential element in the Korean MZ generation these days, we can expect such exercise apps to grow in Korea.

In addition, the demand analysis of the Global Health and Fitness Club Market size & share revenue was valued at approximately USD 83.24 Billion in 2022, according to a market research study published by Custom Market Insights



PESTLE Analysis



**POLITICAL
ANALYSIS**



**ECONOMICAL
ANALYSIS**



**SOCIAL
ANALYSIS**



**TECHNOLOGICAL
ANALYSIS**



**LEGAL
ANALYSIS**



**ENVIRONMENTAL
ANALYSIS**

Political Analysis

법인종류	소득종류	각사업연도 소득		
		과세표준	세율	누진공제
영리법인		2억 이하	10% (9%)	-
		2억 초과 200억 이하	20% (19%)	2,000만원
		200억 초과 3,000억 이하	22% (21%)	42,000만원
		3,000억 초과	25% (24%)	942,000만원

corporate tax

▣ 부가가치세 사업자 구분

구분	기준금액	세액 계산
일반과세자	1년간의 매출액 8,000만원 이상	매출세액(매출액의 10%) - 매입세액 = 납부세액
간이과세자	1년간의 매출액 8,000만원 미만	(매출액×업종별 부가가치율×10%) - 공제세액 = 납부세액 ※ 공제세액 = 매입액(공급대가) × 0.5%

< 간이과세자의 업종별 부가가치율(2021.6.30. 이전) >

업종	부가가치율
전기·가스·증기 및 수도 사업	5%
소매업, 재상용 재표수집 및 판매업, 음식점업	10%
제조업, 농업·임업 및 어업, 숙박업, 운수 및 통신업	20%
건설업, 부동산임대업 및 그 밖의 서비스업	30%

< 간이과세자의 업종별 부가가치율(2021.7.1. 이후) >

업종	부가가치율
소매업, 재상용 재표수집 및 판매업, 음식점업	15%
제조업, 농업·임업 및 어업, 숙박업, 전문 운송업	20%
숙박업	25%
건설업, 운수 및 창고업(소화물 전문 운송업은 제외), 정보통신업	30%
금융 및 보험 관련 서비스업, 전문과학 및 기술서비스업(인물사진 및 행사를 영상 촬영업은 제외), 사업시설관리·사업지원 및 임대서비스업, 부동산 관련 서비스업, 부동산임대업	40%
그 밖의 서비스업	30%

VAT

- Korea's corporate and value-added tax rates
- However, the exchange rate, along with tax laws in other countries, such as Chicago, will result in a tax on digital media service providers, which will increase the price of the application's subscription services.

Political Analysis

윤석열정부 2년간 세금 감면 규모와 증가율

세 금	감면규모	증가율
전체	13조5660억원	21.3%
법인세	4조9199억원	43.7%
소득세	7조935억원	19.2%
관세	99억원	16.9%
부가가치세	1조5995억원	14.5%
개별소비세	1120억원	11.2%
인지세	9억원	8.8%
교육세	252억원	6.7%
상속·증여세	-270억원	-1.5%
주세	-82억원	-7.0%
교통·에너지 ·환경세	-539억원	-10.2%
증권거래세	-455억원	-15.9%

*2022년 대비 2024년 조세지출 세목별 현황
*자료:기획재정부 자료를 재가공

- According to the 2024 Tax Expenditure Budget submitted by the government to the National Assembly on September 5, corporate taxes accounted for 21.0% of the 77.1144 trillion won in tax relief benefits next year.
- Corporate tax reduction increased by 43.7% from 11.2684 trillion won to 4.99199 trillion won over the past two years under the Yoon Seok-yeol administration.
- VAT reduction also accounted for 14.5% with 1.5995 trillion won in reduction benefits.

Social Analysis

한국인 2명 중 1명은 다이어트 중

닐슨, 건강과 웰빙에 관한 글로벌 소비자 인식 보고서 발간

임중선 기자 jslim@medifonews.com

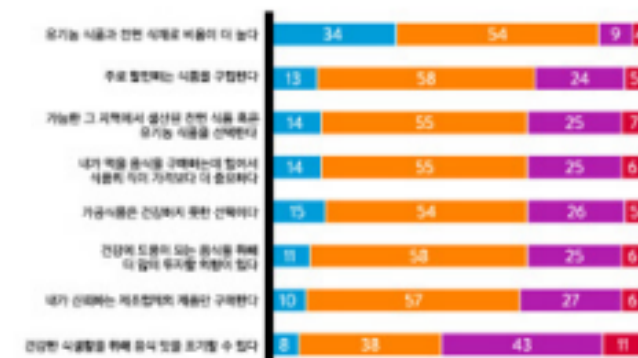
등록 2015-01-22 12:03:41

닐슨이 최근 발간한 '건강과 웰빙에 관한 글로벌 소비자 인식 보고서'에 따르면 한국인 5명중 3명(60%)이 자신이 과체중이라고 여기고 있으며, 응답자의 절반이 넘는 55%가 현재 다이어트 중이라고 밝혔다.

전세계 소비자들 역시 약 2명중 1명 (49%)이 자신이 과체중이라고 생각하고 있으며, 절반에 이르는 50%의 전세계 소비자들 체중을 줄이려고 노력하고 있는 것으로 나타나, 다이어트와의 전쟁은 전세계 인구가 공통적으로 고민하고 있는 문제임이 다시 한 번 드러났다.

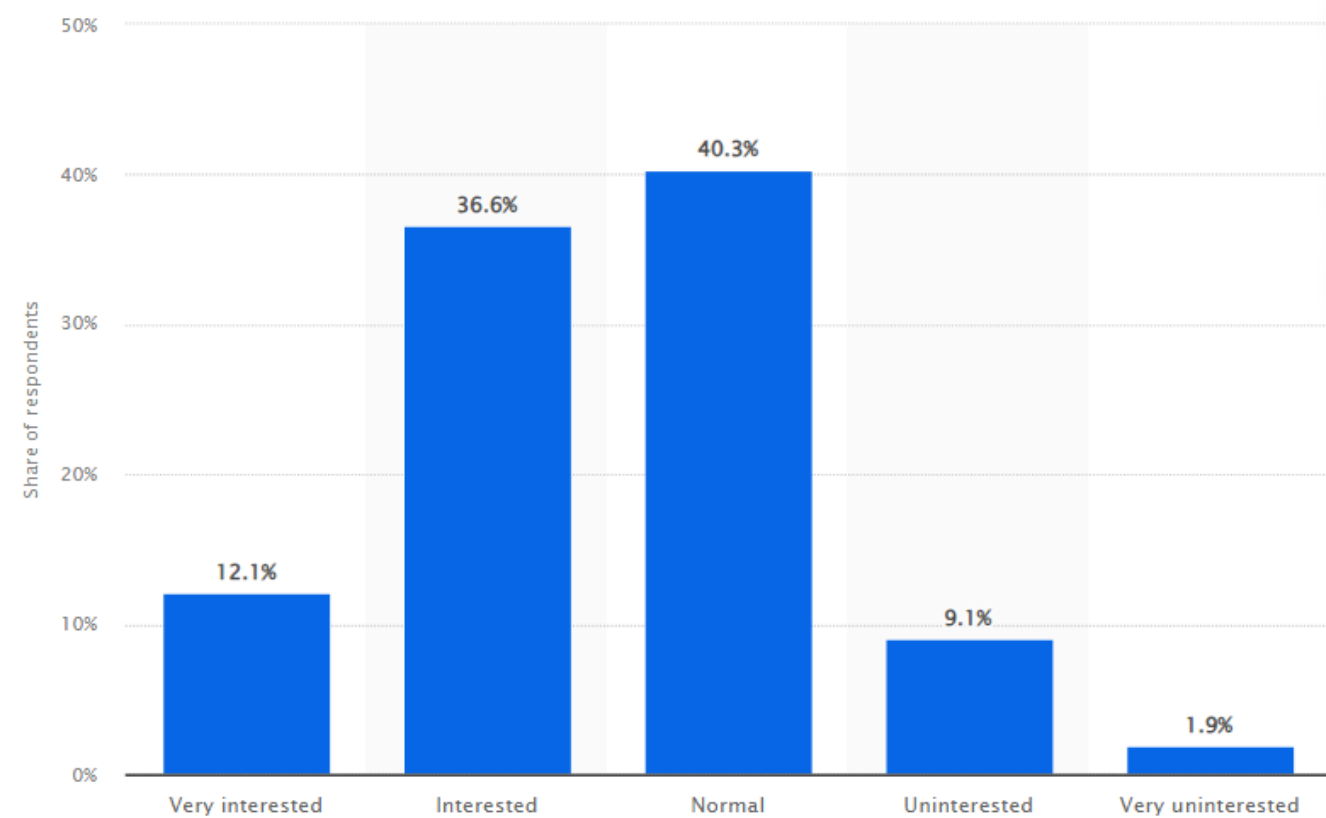
건강한 음식에 대한 한국 소비자들의 인식

단위: %, 전체응답자: 506명



- As a result, One in two Koreans are on weight control, and 70% are willing to invest more in healthy food.
- Source: Foodnews (<http://www.foodnews.co.kr>)

Interest in diet management in South Korea as of July 2022



Details: South Korea; July 23, 2022; 1,000 respondents; 20-69 years; Online Access Panel

© Statista 2023

Social Analysis

2022 National Physical Activity Survey by
Ministry of Culture, Sports, and Tourism

- A Study on the Most Common Physical Activities Participated in by Regular Physical Activity Participants
- People with an Income of Over 3 Million Won Are More Likely to Participate in Fitness Activities

Technological Analysis

머신러닝 기반 사진인식 기술을 활용한 다이어트 AI

저널정보

한국방송·미디어공학회
한국방송미디어공학회 학술발표대회 논문집 | 학술대회자료
한국방송·미디어공학회 2020 추계학술대회
2020.11 | 385 - 388 (4page)

저자정보

노가현 (서울과학기술대학교)
윤인경 (서울과학기술대학교)
김동호 (서울과학기술대학교)

- Using the existing artificial intelligence-based food photo recognition function, the user's diet management can also be helpful (food lens)
- Therefore, the application will be an application that can provide , and diet analysis.

Legal Analysis

〈표 1〉 규제 수준과 기술의 잠재위험도

		기술 규제 수준	
		높음	낮음
기술의 잠재위험	높음	바람직함	위험노출
	낮음	혁신저하	바람직함

Artificial Intelligence (AI) Personal Information Protection Self-Checklist

May 31, 2021

- In general, the absence of laws related to artificial intelligence technology creates large and small problems. This is also seen in the field of motion recognition.
- However, until now, dance coaching services have not been subject to any legal regulations in contrast to controversial ones such as facial recognition.
- Therefore, AI trainers are also not expected to be subject to major legal regulations.
- The Personal Information Protection Commission (PIPC) proposes to check the developer's checklist for fear of infringement of personal information by artificial intelligence.

IT·과학

"음식물 낭비, AI 분석으로 미리 막습니다"

선택결 기자 ☆

입력 2023.02.24 08:24 수정 2023.02.24 08:36

가가

오늘의



류제윤 누비랩 CTO 인터뷰

구글 지원 순환경제 스타트업에 선정
AI 푸드스캐너로 음식쓰레기 절감



Environmental Impacts of Food Production

by Hannah Ritchie, Pablo Rosado and Max Roser

Introduction Key Insights Data Explorer Research & Writing Charts Endnotes Cite This Work Reuse This Work

Agriculture has a significant environmental impact in three key ways.

First, it requires large amounts of fresh water, which can cause significant environmental pressures in regions with water stress. It needs water as input and pollutes rivers, lakes, and oceans by releasing nutrients.

It is a crucial driver of climate change, responsible for around one-quarter of the world's greenhouse gas emissions.

RELATED TOPICS

Land use →

Biodiversity →

Hunger and Undernourishment

CO₂ and Greenhouse Gas Emiss

Environmental Analysis

- Providing the proper amount of food information through AI can also prevent environmental pollution.

<http://stock.mk.co.kr/news/view/61472>

<https://www.sciencedirect.com/science/article/pii/S2213078020300682>

PLANFIT AI APP

(diet program)

COST AND BENEFIT ANALYSIS

Kim Doyeon Kim Jihwan Yeom Jungwoo Aurelia Valencia

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III. COST AND REVENUE ESTIMATION LOGIC &
ESTIMATED INCOME STATEMENT

03 CASH FLOW

I. INDIVIDUAL CASE

II. BIZ CASE

01 ITEM IDENTIFICATION

01

I. COST ITEM - 도연

COST ITEM		RELATED CRITERIA
MAIN CATEGORY	SUBCATEGORY	
PURCHASE COST	SOFTWARE DEVOLOPMENT COST	2000 (AVERAGE OUTSOURCING PRICE)
	DATABASE CONSTRUCTION COST	500 (AVERAGE OUTSOURCING PRICE)
OPERATING AND MAINTENANCE COST	SOFTWARE OPERATING COST	2000 * 20% = 400
	AI CAMERA COST	300+ EXCESSIVE CALL COUNT*0.0060 PER MONTH
	DATABASE SERVER MAINTENANCE COST (SAP HANA)	392 (DB COMPANY’S ESTIMATION) PER MONTH
	MARKETING COST	500 PER YEAR

UNIT: TEN THOUSANDS KRW

01

I. COST ITEM - 도연

COST ITEM		RELATED CRITERIA
MAIN CATEGORY	SUBCATEGORY	
PURCHASE COST	SOFTWARE DEVOLOPMENT COST	2000 (AVERAGE OUTSOURCING PRICE)
	DESIGN UX/UI	1000
	EQUIPMENT	2000
OPERATING AND MAINTENANCE COST	SOFTWARE OPERATING COST	2000 * 20% = 400
	AI CAMERA COST	300+ EXCESSIVE CALL COUNT*0.0060 PER MONTH
	DATABASE SERVER MAINTENANCE COST (SAP HANA)	392 (DB COMPANY'S ESTIMATION) PER MONTH
	MARKETING COST	500 PER YEAR

UNIT: TEN THOUSANDS KRW

01

II. BENEFIT ITEM - QUANTITATIVE - 정우

IT
EFFECTIVENESS

MAINTAIN
OR
INCREASE
REVENUE

INCREASE
THE NUMBER
OF
CUSTOMER

REDUCE
INFORMATION
RETRIEVAL
TIME

IT
EFFICIENCY

REDUCE
DEVELOPMENT
COSTS

REDUCE
DATABASE
CONSTRUCTION
COSTS

REDUCE
RESPONSE
TIME

COST SAVINGS
IN
CALCULATING
EXERCISE
EFFECTS

REDUCE
THE COST
OF
COLLECTING
INFORMATI
ON

FINANCE

CUSTOMER

INTERNAL
PROCESS

LEARNING&
INNOVATION

01

II. BENEFIT ITEM - QUANTITATIVE - 정우

IT
EFFECTIVENESS

MAINTAIN
OR
INCREASE
REVENUE

INCREASE
THE NUMBER
OF
CUSTOMER

REDUCE
INFORMATION
RETRIEVAL
TIME

IT
EFFICIENCY

COST SAVINGS
IN
CALCULATING
DIET NUTRIENT

FINANCE

CUSTOMER

INTERNAL
PROCESS

LEARNING&
INNOVATION

01

II. BENEFIT ITEM - QUALITATIVE - 지환

IT
EFFECTIVENESS



CUSTOMIZED
SERVICES

CUSTOMER
SATISFACTION



NEW PROJECT
FOR
DEVELOPERS

IT
EFFICIENCY



GET THE
STRUCTURE AND
DESIGN OF
EXISTING APPS
FOR THE NEW
SERVICE

UNIQUE
ALGORITHM
FOR THE
PERSONALIZED
PROGRAM

FINANCE

CUSTOMER

INTERNAL
PROCESS

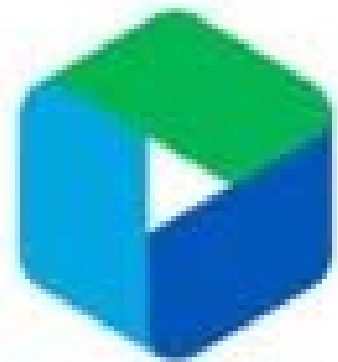
LEARNING&
INNOVATION

02 ESTIMATION PROCESS

02

I. COST ESTIMATION LOGIC

ESTIMATED PURCHASE COST



wishket

WE GOT THE AVERAGE PRICE OF THE APP DEVELOPMENT OUTSOURCING ACCORDING TO THE OUTSOURCING PROJECT PLATFORM, WISHKET.

AND WE ALSO USE SW PROJECT PRICE SELECTION GUIDE TO ESTIMATE THE COST BY MULTIPLYING THE FUNCTION SCORE AND THE UNIT PRICE, VARIOUS WEIGHTED VALUES.

02

I. COST ESTIMATION LOGIC

ESTIMATED MAINTENANCE COST

2. 서버요금제

구분		월요금(원/월)	시간요금(원/시간)	비고
vCore * Mem	Disk			
2 * 20	90GB	224,000	311	
4 * 31	140GB	391,000	544	
8 * 62	230GB	790,000	1,098	

(단위:원/월, 부가세별도)

구분	사용 구간	Cloud 서버별 적용	고객별(ID 기준) 적용		
총량제	제구간별 단가 (GB당)	무료	90	80	70
정액제(월단위)	30TB/월	2,000,000원/월			
	50TB/월	3,000,000원/월			

3. SuSE OS

OS	월요금(원/월)	시간요금(원/시간)
SuSE Enterprise Linux 11	130,000	181

ACCORDING TO THE NCLOUD 24, DB SERVER : 790,000 KRW (SERVER MAINTENANCE COST) + 3,000,000 KRW (TRAFFIC COST) + 130,000 KRW (OS)

THUS, SUPPOSE THAT MAINTENANCE COST IS 3,920,000 KRW (MONTHLY)

I. COST ESTIMATION LOGIC

ESTIMATED OPERATING COST (SW PROJECT PRICE SELECTION GUIDE)

TYPICALLY, OPERATING COSTS ARE MULTIPLIED BY 20% OF THE INITIAL COSTS

THE PROGRAM'S DEVELOPMENT COST WAS ABOUT 20 MILLION KRW, AND THE OPERATING COST WAS 4 MILLION KRW.

〈표 IV-9〉 정보화사업 비용 관련 기준

비용항목		관련 기준
대분류	소분류	
구축 사업비	HW/SW 구매비용	정보시스템 하드웨어 규모산정 지침 (한국정보통신기술협회)
	소프트웨어 개발비	SW사업 대가산정 가이드 (한국소프트웨어산업협회)
	데이터베이스 구축비	DB구축비 대가기준 가이드 (한국정보화진흥원)
	IT 컨설팅 비용	SW사업 대가산정 가이드 (한국소프트웨어산업협회)
	시스템 운용환경 구축비	엔지니어링 사업대가의 기준 (지식경제부)
	정보시스템 감리비	정보시스템 감리기준 (행정안전부)
운영 및 유지·보수비	하드웨어 유지·보수 및 재투자비용	내용연수 (조달청 고시)
	소프트웨어 유지·보수 및 재개발비용	SW사업 대가산정 가이드 (한국소프트웨어산업협회)
	시스템 운영비용	SW사업 대가산정 가이드 (한국소프트웨어산업협회)
	통신회선료	국가정보통신서비스 이용지침서 (행정안전부)

02

I. COST ESTIMATION LOGIC

ESTIMATED OPERATING COST (USING API)

doinglab

DLKFKDJLF

구독형 요금 플랜

사용 Device 비례 플랜

요금

1,500원/device/월(부가세 별도)

- 최소 월 1,000 devices 이상 계약 가능
- 무제한 Server Calls
- 대량영양소(탄수화물, 단백질, 지방 등), 미량영양소 포함 총 36종 정보 제공
- Calories 정보 제공
- 고객 지원
- 사용 증가 예상 시 커스텀 플랜 협의 가능

Start Free

사용량 비례 플랜

요금

300만원/월(부가세 별도)

- 개발 기간 반영 3개월 무료
(1,000 server calls/월)
- 30,000 Server Calls/월
 - 대량영양소(탄수화물, 단백질, 지방 등), 미량영양소 포함 총 36종 정보 제공
 - Calories 정보 제공
 - 고객 지원
 - 사용 증가 예상 시 커스텀 플랜 협의 가능

Start Free

커스텀 플랜

요금

요금 별도 문의 및 협의

- Basic 기능 모두 포함
- 맞춤형 server calls
 - 최우선 고객 지원
 - Basic 플랜 대비 할인 적용

Start Free

푸드렌즈 솔루션 공급계약서

■ 계약내용

솔루션명	푸드렌즈 솔루션 (Food Lens Solution)	
포함사항	푸드렌즈 REST API 제공 Plan	
	Plan	Trial 월 1K X 3개월 이후 Basic 월 50K
포함사항	푸드렌즈 제공버전 - Food Lens for Korean 1.0	
	푸드렌즈 SDK 제공 - 공급자가 제공하는 서버에 접속하여 Food Lens 기능을 사용할 수 있는 SDK 제공 및 UI가 포함된 무료 SDK 제공 (Customize 불포함)	
계약일	플랫폼 가입일	
계약기간	플랫폼 가입일 ~ 계약 해지일	
계약금액	무상 Trial 기간 이후 월 3,000,000원 (부가세 별도)	
계약자의 서비스	앱서비스명 (Android, iOS)	
지급방법	매월 카드 결제 또는 세금계산서 발행 후 7일 이내 지정계좌에 현금 입금 - 입금계좌 : 신한은행 100-031-800855 ㈜두잉랩	
특이사항	* 월 단위 계약 Call 초과 시 추가 과금 - Trial 기간 : 초과 Call수 X 300원 - Basic 기간 : 초과 Call수 X 60원 * 별도 협의 후 계약 조건 변경 가능하며, 변경 계약서 우선 적용	

"공급자"

회사명 : 주식회사 두잉랩

사업자번호 : 552-88-00440

주소 : 서울시 강남구 선릉로 93길 27, 5층

대표 : 진 송 백 (인)

"계약자"

회사명 :

사업자번호 :

주소 :

대표 : (인)

02

I. COST ESTIMATION LOGIC

ESTIMATED SALARY



이얌 - 나만의 식단 관리 코치 12+

체중 감량을 위한 식단 관리 및 다이어트 케어 서비스

[Yeongbeom Song](#)

★★★★★ 4.5 • 47개의 평가

무료 · 앱 내 구입 제공

상위 42% **4,043만원**

월 세전 **337만원**

출처 : 국민연금 2023.09

4 PEOPLE

상위 42% **9명**

퇴사 4명 (47%)

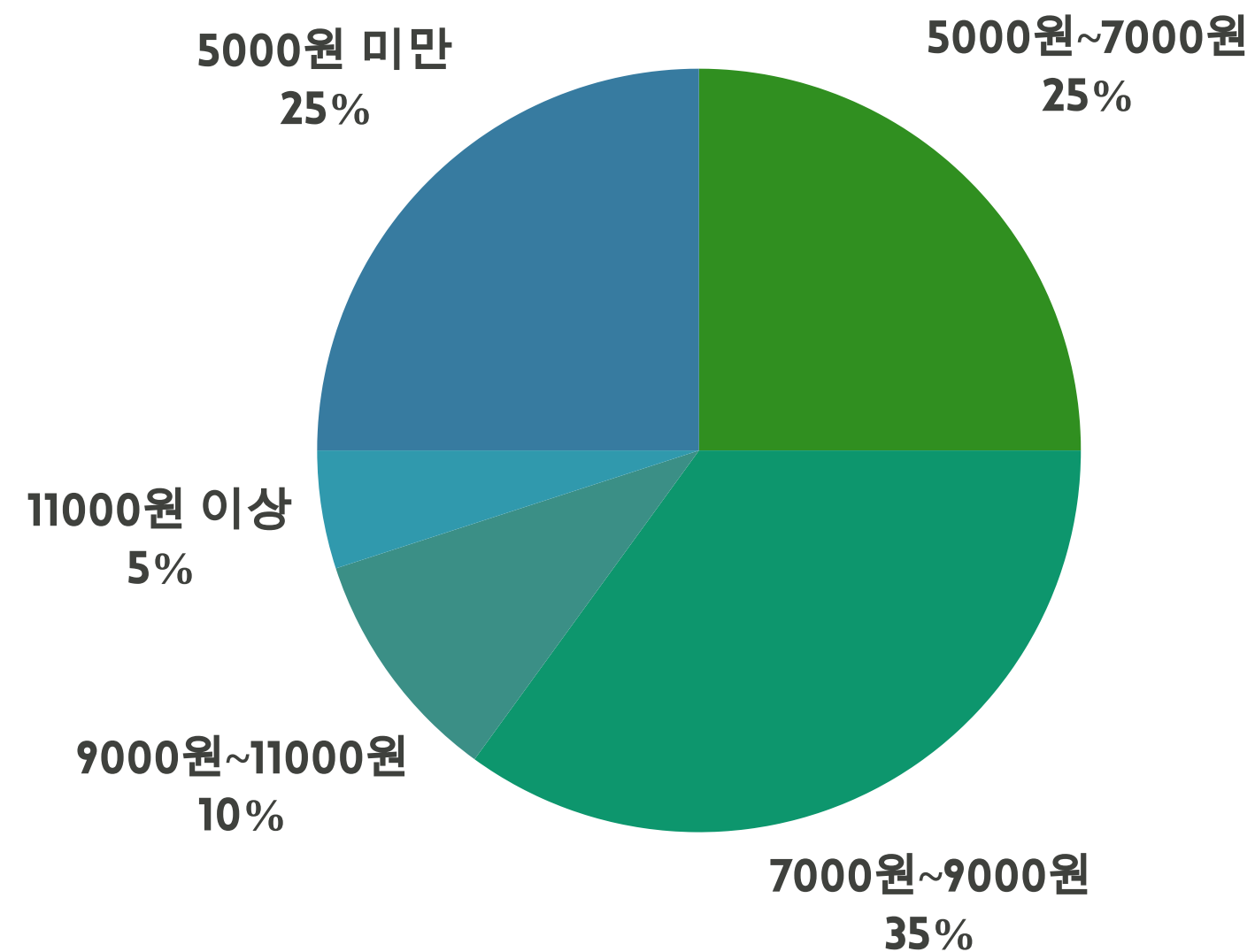
입사 4명 (47%)

출처 : 국민연금 2023.09 ⓘ

02

II. BENEFIT ESTIMATION LOGIC

ESTIMATED SUBSCRIPTION FEE



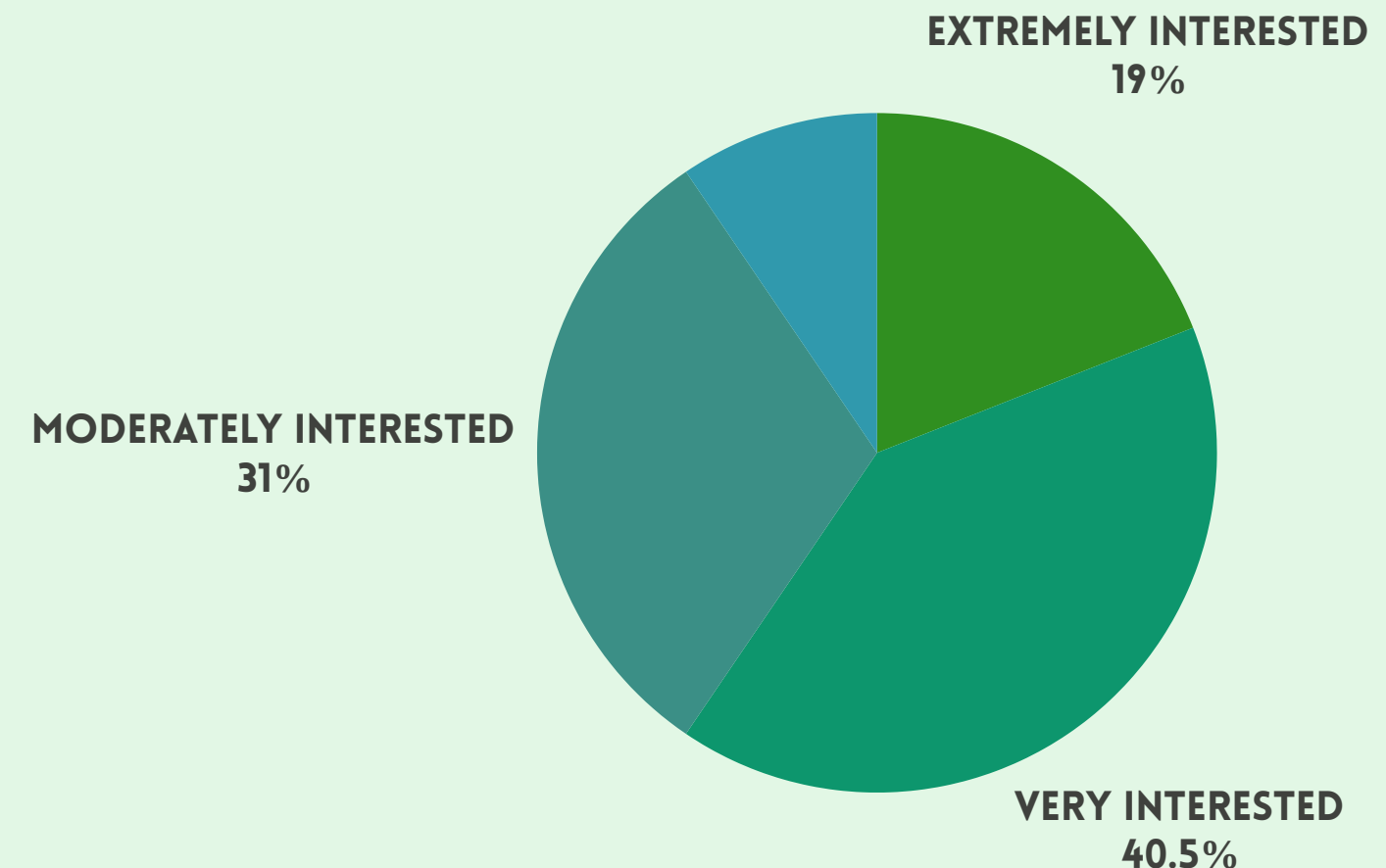
ACCORDING TO THE SURVEY, 35% OF PEOPLE SAID A SUBSCRIPTION FEE BETWEEN 3,000 AND 6,000 KRW IS APPROPRIATE

THUS, SUPPOSE THAT SUBSCRIPTION FEE IS 7,500 KRW PER MONTH.

02

ESTIMATED NUMBER OF USERS

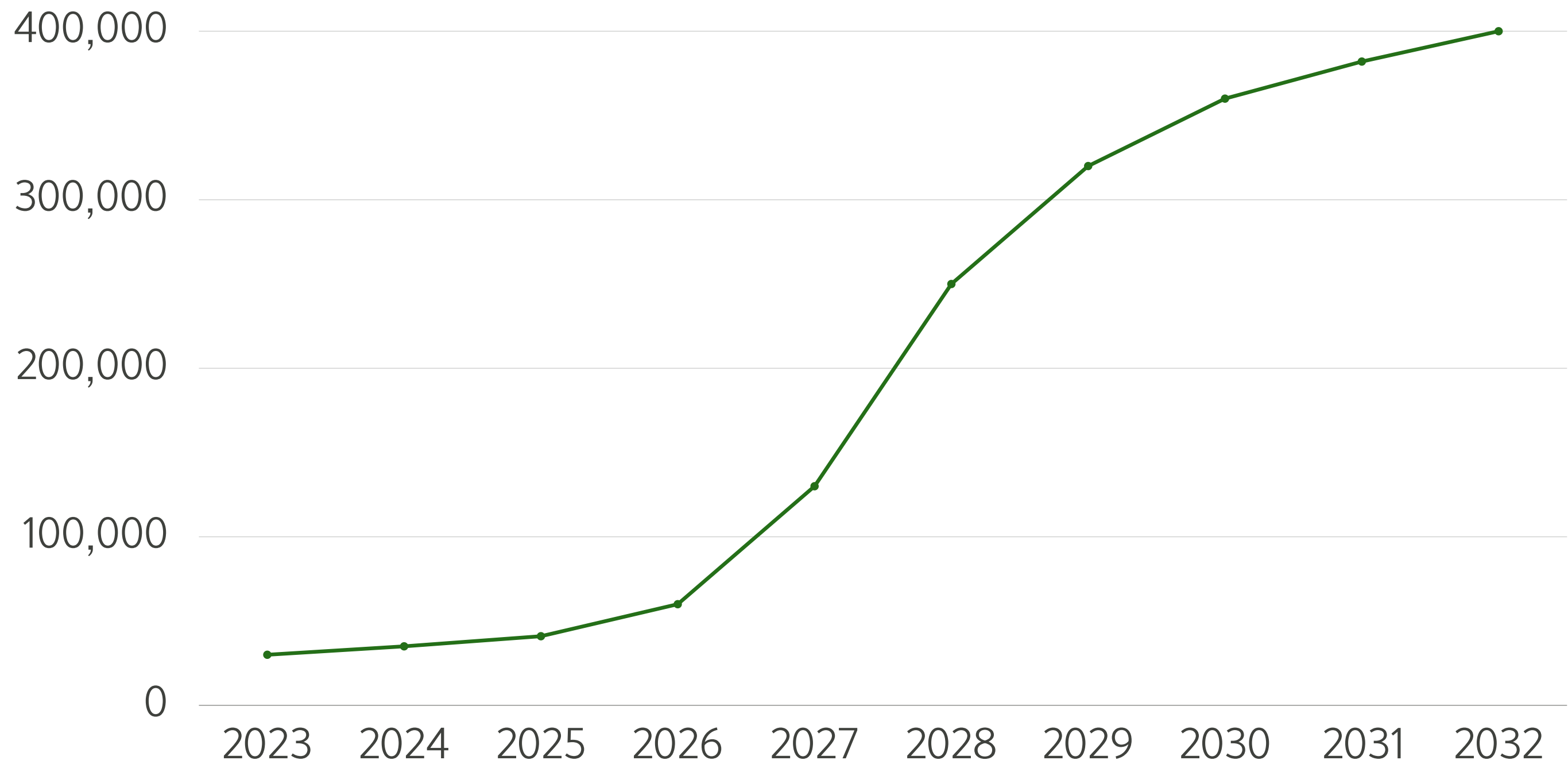
Survey results:
Would you be willing to use it if the fitness app adds a diet management feature?



According to the survey, 19% of people said they were interested in the diet proposal function of the fitness app

Thus, suppose that approximately 20% of the current 150,000 Planfit app users (30,000) are real USERS of the dietary suggestion service.

02



ESTIMATED NUMBER OF USERS

02

ESTIMATED NET SALES – SUBSCRIPTION FEE

1	2	3	4	5	6	7	8	9	10
2,700	3,150	3,690	5,400	11,700	22,500	28,800	32,400	34,380	36,000

(Unit: 1,000,000 KRW)

III. INCOME STATEMENT & ESTIMATION PROCESS

PROFORMA INCOME STATEMENT	ESTIMATION PROCESS
REVENUE	SUBSCRIPTION FEE(4900)*USERS OF EACH YEAR
ADDICTIVE OFFICE RENT EXPENSE	240000000 PER YEAR
MARKETING COST	9% OF REVENUE PER YEAR
SALARY EXPENSE	# OF LABOR * AVG. SALARY
OPERATING COST	SOFTWARE DEVELOPMENT COST (20000000) * 0.2
SYSTEM MAINTENANCE	20% OF DEVELOPMENT COST
TAX	REVENUE * 19%
NET PROFIT	

03 CASH FLOW

03

I. INDIVIDUAL CASE – SALES

TAX RATE	19%										
	0	1	2	3	4	5	6	7	8	9	10
NET SALES(SUBSC RIPTION)		2,700,000,000	3,150,000,000	3,690,000,000	5,400,000,000	11,700,000,000	22,500,000,000	28,800,000,000	32,400,000,000	34,380,000,000	36,000,000,000
AFTER TAX		2,187,000,000	2,551,500,000	2,988,900,000	4,374,000,000	9,477,000,000	18,225,000,000	23,328,000,000	26,244,000,000	27,847,800,000	29,160,000,000

03

I. INDIVIDUAL CASE – COSTS

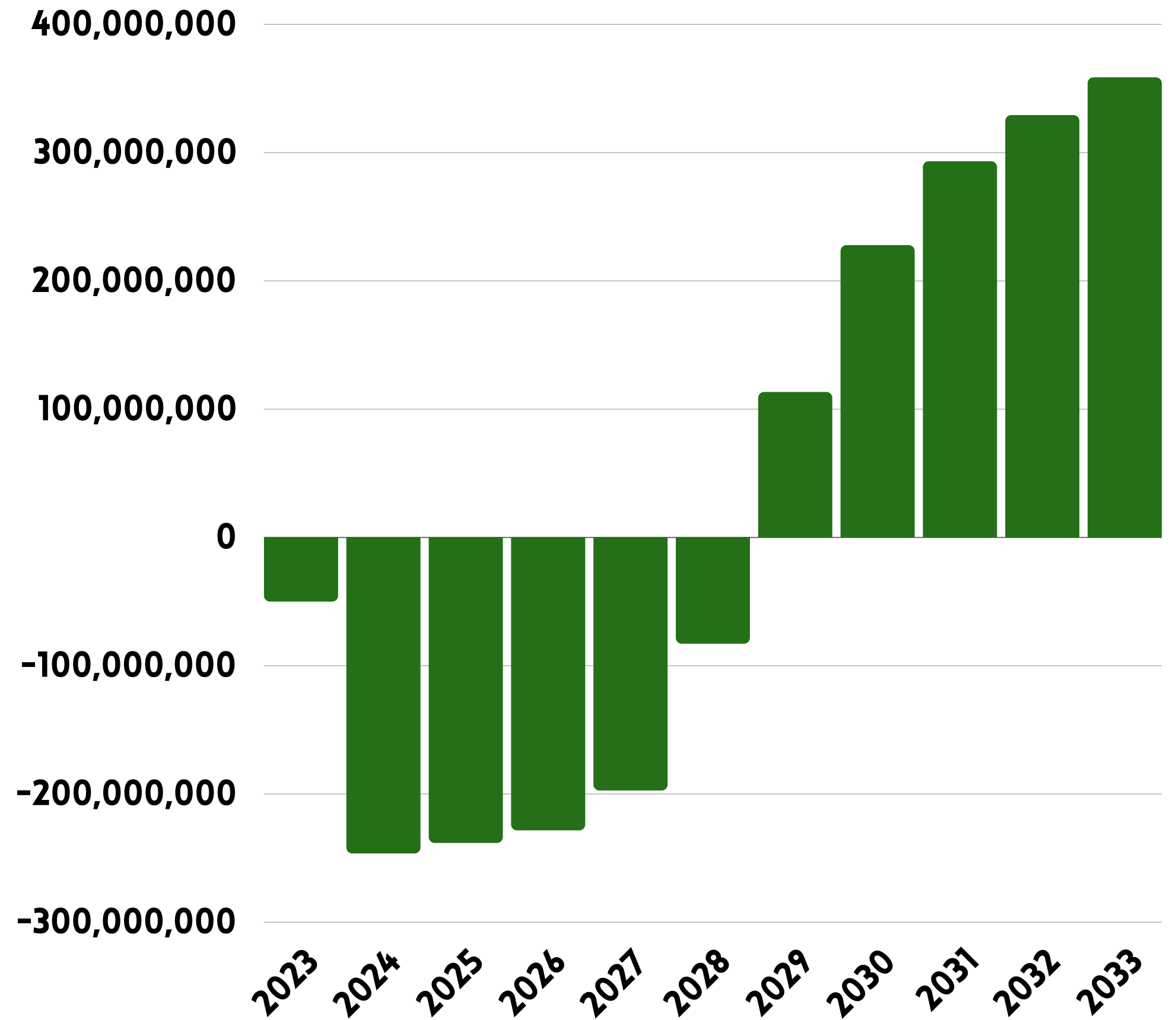
YEAR	0	1	2	3	4	5	6	7	8	9	10
EQUIPMENT	20,000,000										
OFFICE RENT FEE		70,000,000	70,000,000	70,000,000	70,000,000	70,000,000	70,000,000	70,000,000	70,000,000	70,000,000	70,000,000
DEVELOPING PROGRAM	20,000,000										
SYSTEM MAINTENANCE		4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000
OPREATING COST		47,040,000	47,040,000	47,040,000	47,040,000	47,040,000	47,040,000	47,040,000	47,040,000	47,040,000	47,040,000
DESIGN UX/UI	10,000,000										
MARKETING		199,786,500	233,084,250	273,041,550	399,573,000	865,741,500	1,664,887,500	2,131,056,000	2,397,438,000	2,543,948,100	2,663,820,000
SALARY		160,000,000	160,000,000	160,000,000	160,000,000	160,000,000	160,000,000	160,000,000	160,000,000	160,000,000	160,000,000
ETC											
TOTAL	50,000,000	2,466,226,500	2,828,024,250	3,262,181,550	4,637,013,000	9,702,181,500	18,385,327,500	23,450,496,000	26,344,878,000	27,936,788,100	29,239,260,000

II. BIZ CASE

[illegible]

03

III. CASH FLOW



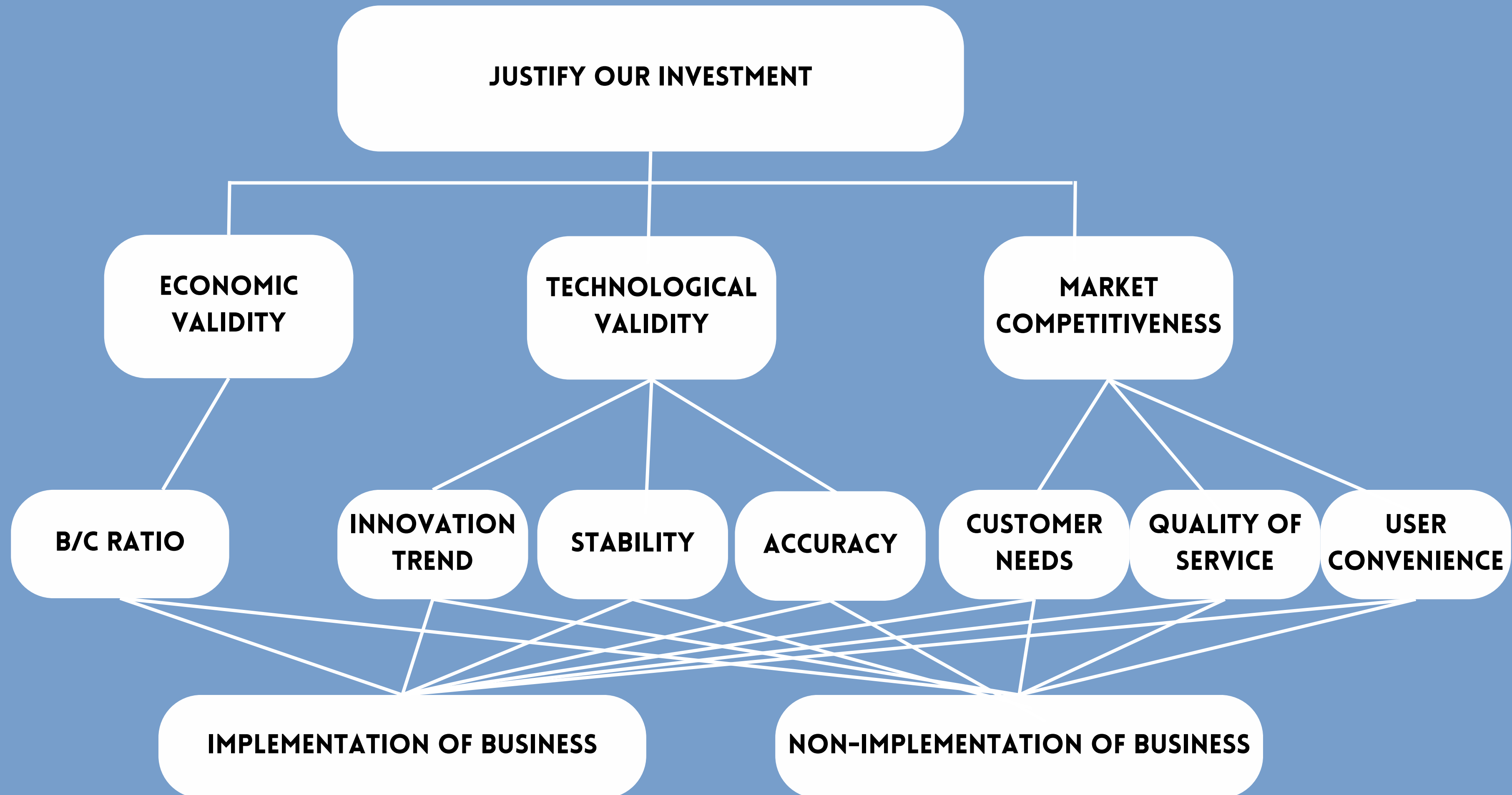
PLANFIT AI APP

(diet program)

AHP ANALYSIS

Kim Doyeon Kim Jihwan Yeom Jungwoo Aurelia Valencia

DECISION TREE



INDIVIDUAL WEIGHTS

CALCULATION OF WEIGHTS

VALIDITY

FACTOR WEIGHT	PRIORITY CALCULATIONS	RESULTING PRIORITIES
ECONOMIC	$(0.5455+0.5000+0.5714)/3$	0.5390
TECHNOLOGICAL	$(0.1818+0.1667+0.1429)/3$	0.1638
MARKET COMPETITIVENESS	$(0.2727+0.3333+0.2857)/3$	0.2973
TOTAL	JUNGWOO	1

FACTOR WEIGHT	PRIORITY CALCULATIONS	RESULTING PRIORITIES
ECONOMIC	$(0.6522+0.1304+0.2174)/3$	0.5973
TECHNOLOGICAL	$(0.1304+0.1613+0.5556)/3$	0.2824
MARKET COMPETITIVENESS	$(0.2174+0.0323+0.1111)/3$	0.1202
TOTAL	AURE	1

FACTOR WEIGHT	PRIORITY CALCULATIONS	RESULTING PRIORITIES
ECONOMIC	$(0.6774+0.7143+0.5385)/3$	0.6434
TECHNOLOGICAL	$(0.2258+0.2381+0.3846)/3$	0.2828
MARKET COMPETITIVENESS	$(0.0968+0.0476+0.0769)/3$	0.0738
TOTAL	DOYEON	1

FACTOR WEIGHT	PRIORITY CALCULATIONS	RESULTING PRIORITIES
ECONOMIC	$(0.2381+0.3571+0.2286)/3$	0.2746
TECHNOLOGICAL	$(0.0476+0.0714+0.0857)/3$	0.0683
MARKET COMPETITIVENESS	$(0.7143+0.5714+0.6857)/3$	0.6571
TOTAL	JIHWAN	1

VALIDITY

FACTOR WEIGHTS	ECONOMIC	TECHNOLOGICAL	MARKET COMPETITIVENESS
JUNGWOO	0.5390	0.1638	0.2973
DOYEON	0.6434	0.2828	0.0738
AURE	0.5973	0.2824	0.1202
JIHWAN	0.2746	0.0683	0.6571
GEOMETRIC MEAN	0.4884	0.1729	0.2040
NORMALIZATION	0.5644	0.1998	0.2358

MARKET COMPETITIVENESS

FACTOR WEIGHT	PRIORITY CALCULATIONS	RESULTING PRIORITIES
USER CONVENIENCE	$(0.5455+0.5714+0.5000)/3$	0.5000
SERVICE OF QUALITY	$(0.2727+0.2857+0.3333)/3$	0.3333
CONSUMER NEEDS	$(0.1818+0.1429+0.1667)/3$	0.1667
TOTAL	JUNGWOO	1

FACTOR WEIGHT	PRIORITY CALCULATIONS	RESULTING PRIORITIES
USER CONVENIENCE	$(0.7974+0.8630+0.4737)/3$	0.4737
SERVICE OF QUALITY	$(0.1140+0.1233+0.4737)/3$	0.4737
GOVERNMENT	$(0.0886+0.0137+0.0526)/3$	0.0526
TOTAL	AURE	1

FACTOR WEIGHT	PRIORITY CALCULATIONS	RESULTING PRIORITIES
USER CONVENIENCE	$(0.6774+0.5833+0.7059)/3$	0.6555
SERVICE OF QUALITY	$(0.0968+0.0833+0.0588)/3$	0.0796
CONSUMER NEEDS	$(0.2258+0.3333+0.2353)/3$	0.2648
TOTAL	DOYEON	1

FACTOR WEIGHT	PRIORITY CALCULATIONS	RESULTING PRIORITIES
USER CONVENIENCE	$(0.2353+0.3333+0.2258)/3$	0.2648
SERVICE OF QUALITY	$(0.0588+0.0833+0.0968)/3$	0.0796
CONSUMER NEEDS	$(0.7059+0.5833+0.6774)/3$	0.6555
TOTAL	JIHWAN	1

MARKET COMPETITIVENESS

FACTOR WEIGHTS	CONSUMER NEEDS	COMPANY POLICY	GOVERNMENT POLICY
JUNGWOO	0.5000	0.3333	0.1667
DOYEON	0.6555	0.0796	0.2648
AURE	0.4737	0.4737	0.0526
JIHWAN	0.2648	0.0796	0.6555
GEOMETRIC MEAN	0.4503	0.1778	0.1975
NORMALIZATION	0.5454	0.2154	0.2392

TECHNOLOGY

FACTOR WEIGHT	PRIORITY CALCULATIONS	RESULTING PRIORITIES
INNOVATION TREND	$(0.1111+0.1000+0.1176)/3$	0.1096
STABILITY	$(0.3333+0.3000+0.2941)/3$	0.3092
QUALITY OF SERVICE	$(0.5556+0.6000+0.5882)/3$	0.5813
TOTAL	JUNGWOO	1

FACTOR WEIGHT	PRIORITY CALCULATIONS	RESULTING PRIORITIES
INNOVATION TREND	$(0.0667+0.0204+0.1220)/3$	0.0697
STABILITY	$(0.5333+0.1633+0.1463)/3$	0.2819
QUALITY OF SERVICE	$(0.4000+0.8163+0.7317)/3$	0.6493
TOTAL	DOYEON	1

FACTOR WEIGHT	PRIORITY CALCULATIONS	RESULTING PRIORITIES
INNOVATION TREND	$(0.6923+0.7143+0.6000)/3$	0.6689
STABILITY	$(0.2308+0.2381+0.3333)/3$	0.2674
QUALITY OF SERVICE	$(0.0769+0.0476+0.0667)/3$	0.0637
TOTAL	AURE	1

FACTOR WEIGHT	PRIORITY CALCULATIONS	RESULTING PRIORITIES
INNOVATION TREND	$(0.0769+0.0476+0.0968)/3$	0.0738
STABILITY	$(0.3846+0.0,2381+0.2258)/3$	0.2828
QUALITY OF SERVICE	$(0.5385+0.7143+0.6774)/3$	0.6434
TOTAL	JIHWAN	1

TECHNOLOGY

FACTOR WEIGHTS	INNOVATION TREND	STABILITY	QUALITY OF SERVICE
JUNGWOO	0.1096	0.3092	0.5813
DOYEON	0.0697	0.2819	0.6493
AURE	0.6689	0.2674	0.0637
JIHWAN	0.0738	0.2828	0.6434
GEOMETRIC MEAN	0.1394	0.2849	0.3527
NORMALIZATION	0.1794	0.3667	0.4539

CONSOLIDATED WEIGHTS

FACTOR WEIGHTS	CONSUMER NEEDS	COMPANY POLICY	GOVERNMENT POLICY
COMPUTATION	0.5454×0.2358	0.2154×0.2358	0.2392×0.2358
CONSOLIDATED WEIGHT	=0.1286	=0.0508	=0.0564

FACTOR WEIGHTS	INNOVATION TREND	STABILITY	QUALITY OF SERVICE
COMPUTATION	0.1794×0.1998	0.3667×0.1998	0.4539×0.1998
CONSOLIDATED WEIGHT	0.0358	0.0733	0.0907

AHP DECISION

CALCULATION OF AHP SCORE

6	5	0.0358	0.03069	0.00511	0.02983	0.00597				
2	2	0.0733	0.02443	0.04887	0.02443	0.04887				
1	1	0.0907	0.04535	0.04535	0.04535	0.04535				
6	4	0.1286	0.11023	0.01837	0.10288	0.02572				
3	2	0.0508	0.0127	0.0381	0.01693	0.03387				
3	3	0.0564	0.0141	0.0423	0.0141	0.0423				
3.1		0.5644	0.42674	0.13766	0.42674	0.13766				
			0.66424	0.33576	0.66027	0.33973				
8	7		0.03182	0.00398	0.03133	0.00448				
6	5		0.01047	0.06283	0.01222	0.06108				
3	4		0.06803	0.02268	0.07256	0.01814				
6	7		0.11023	0.01837	0.11253	0.01608				
1	1		0.0254	0.0254	0.0254	0.0254				
1	1		0.0282	0.0282	0.0282	0.0282				
			0.42674	0.13766	0.42674	0.13766				
			0.70089	0.29911	0.70897	0.29103				
5	4	0.1286	0.10717	0.02143	0.10288	0.02572				
1	1	0.0508	0.0254	0.0254	0.0254	0.0254				
1	2	0.0564	0.0282	0.0282	0.0376	0.0188				
6	7	0.0733	0.01047	0.06283	0.00916	0.06414				
5	2	0.0358	0.00597	0.02983	0.01193	0.02387				
5	7	0.0907	0.01512	0.07558	0.01134	0.07936				
			0.42674	0.13766	0.42674	0.13766				
			0.61906	0.38094	0.62505	0.37495				
			0.6642	0.6603	0.7009	0.709	0.619	0.625	0.66307	0.663
			0.3358	0.3397	0.2991	0.291	0.381	0.375	0.33693	0.337

AHP SCORE

GO

DON'T GO

Jungwoo	Doyeon	Jihwan	Aure	score
0.6642	0.6603	0.7009	0.7090	0.6630
0.3358	0.3397	0.2991	0.2910	0.3370

<div> <div>종합 평점</div> <div>시행:미시행</div> </div>	AHP<0.45	$0.45 \leq \text{AHP} < 0.5$	$0.5 \leq \text{AHP} < 0.55$	$0.55 \leq \text{AHP}$
4:0	-	-	타당성 있음	타당성 있음
3:1	Feedback	아주 신중	약간 신중	타당성 있음
2:2	AHP<0.42 타당성 없음 AHP>0.42 약간신중	신중	신중	AHP<0.58 타당성 없음 AHP>0.58 약간신중
1:3	타당성 없음	약간 신중	아주 신중	Feedback
0:4	타당성 없음	타당성 없음	-	-

주: 1) 시행:미시행은 사업시행 평가자 수와 사업 미시행 평가자 수의 비율(4인기준)을 나타냄
 2) AHP 사업시행 대안의 AHP 종합점수를 나타냄
 3) - 는 해당사항 없음을 나타냄
 자료: 예비타당성조사 수행을 위한 일반지침 수정·보완 연구 제5판 (2008), KDI

**THANK YOU FOR
WATCHING!**

QUESTIONS?

Factor weights	Economic	Technological	Market
Economic	1	2	1
Technological	0.5	1	3
Market	1	0.3333	1
Total	2.5	3.3333	5

Factor weights	User convenience	Service quality	Consumer needs
User convenience	1	5	2
Service quality	0.2	1	1
Consumer needs	0.5	1	1
Total	1.7	7	4

Factor weights	Stability	Innovative trend	Accuracy
Stability	1	5	2
Innovative trend	0.2	1	2
Accuracy	0.5	0.5	1
Total	1.7	6.5	5

user convinence	Change	maintain
Change	1	1
maintain	1	1
total	2	2

service quality	Change	maintain
Change	1	5
maintain	0.2	1
total	1.2	6

consumer needs	Change	maintain
Change	1	6
maintain	0.1667	1
total	1.1667	7

stability	Change	maintain
Change	1	1
maintain	1	1
total	2	2

innovative trend	Change	maintain
Change	1	5
maintain	0.2	1
total	1.2	6

accuracy	Change	maintain
Change	1.00	2
maintain	0.5	1.00
total	1.5	3

헬스케어산업에서의 인공지능과 IoT의 융합을 통한 사람 동작 분석 시스템 연구

Human motion analysis system research through the convergence of artificial intelligence and IoT in the healthcare industry

저널정보

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Train a video action recognition model

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[Train an AutoML model](#)

This page shows you how to train an AutoML action recognition model from a video dataset using either the Google Cloud console or the Vertex AI API.

Technological Analysis

- AI motion recognition technology has grown significantly. In addition, human motion analysis systems are also used in convergence with IoT.
- A model that trains AI for posture recognition exists, making AI posture recognition training more convenient.