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SAUDI CODERS

THE GREEN OASIS

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ABOUT THE TEAM:

SaudiCoders is a team of 5 students established in August 2023. The team aims to expand in the field of Computer technology in general.

TEAM MEMBERS:

- ABDULRAHMAN AHMAD
- MOHAMMED SAAD (Not Participating)
- MESHAL ALI
- YASER ALI
- THAMER MASHHOR (Not Participating)

THE TEAM`S GOALS INCLUDE:

- Developing computer science skills and knowledge.
- Participating in programming competitions.
- Creating innovative programming projects.
- Contributing to the open source community.
- Spreading awareness about programming in Saudi Arabia.

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INTRODUCTION

This project revolutionizes sustainable agriculture, increasing plant production, and contributing to food security .

FEATURES

01

- **Reduced agricultural business costs:** Achieved by Early diagnosis, .

02

- **Minimized loss:** achieved by providing plants with resources specific to their needs, reducing pest problems and improper practices.

03

- **Increased plant production:** achieved by creating the ideal environment for plant growth.

04

- **Contribution to food security:** achieved by producing high-quality food products.

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THE GOALS

01

- Improving production and quality of plants

02

- Early Diagnosis of Problems

03

- Reducing costs and waste, and Increasing profitability

04

- Assisting expert and non-expert users

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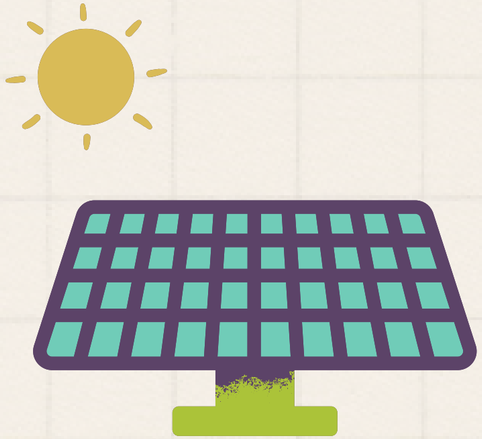
DEPEND ON



Sensor’s tests :

NPK test.
Sunlight’s intensity test.
Soil moisture test.
Temperaturen test.
Camera capturing and recording.

AI models :

Computer vision model.
Images classification model.
LLM model.

Datasets :

A dataset of the plants best condition.
A dataset of wilted and fresh plants .
A dataset of pests and it’s informations.

Energy :

Solar energy

User platform :

It depends on the user.
Website or app or local computer(for businesses).

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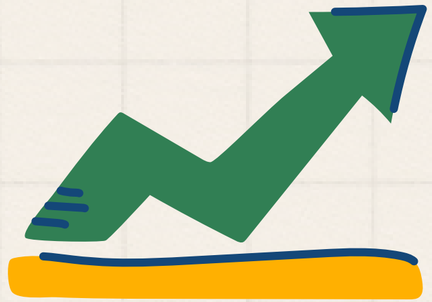
AGRICULTURAL AI TECHNOLOGIES MARKET STATISTICS



MARKET SIZE:

- The global agriculture technologies market was valued at USD 10.32 billion in 2023.
- The market is expected to reach USD 21.15 billion by 2028 at a Compound Annual Growth Rate (CAGR) of 12.7%.

KEY TECHNOLOGIES IN THE MARKET:

- Smart Agriculture: Involves using advanced technologies like IoT, AI, and Big Data to improve productivity.
- Digital Agriculture: Includes the use of Information and Communication Technologies (ICT) to collect, analyze data, and improve agricultural operations.

AGTECH CHALLENGES & SOLUTIONS:

CHALLENGES:

Promoting sustainability by reducing agriculture costs, reducing losses, increasing plant production, and contributing to food security.

SOLUTIONS:

- AI-powered NPK Management: Optimizes fertilizer use with data-driven recommendations for N, P & K, reducing waste and protecting the environment.
- Precision Agriculture: Improves resource management and yields with targeted irrigation and data-driven techniques.

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Key Activities

Assisting expert and non-expert users.
Less time to do routine work

Key Resources

Energy :
Solar panels
Data :
Sensors
Datasets

Value Proposition

Reduces the cost of farming
Reduce the waste
Increases crop yields
Low cost High profit

Customer Relationships

Technical support
Customer feedback and satisfaction surveys
Digital Platform Mobile App

Channels

Direct sales to farmers
online channels

Customer Segments

- Farmers
- Agricultural businesses

Cost Structure

Hardware costs
Software costs
Data storage costs
Customer support costs

Revenue Streams

Subscription fees
Hardware & software sales

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