Capstone Project Proposal

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EcoHabit

Urban Farming and Sustainable Living App

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PLATFORM

Mobile Application

DESCRIPTION

EcoHabit is a unique and innovative platform that encourages and facilitates urban farming and sustainable living. In an increasingly urbanized world, with sustainability as a pressing concern, EcoHabit empowers city dwellers to grow their own food, reduce their carbon footprint, and foster greener urban environments.

KEY FEATURES

- User Registration and Personalization: Create a personal account and set preferences based on the type of plants to grow, available space, climate, etc.

- Gardening Guide: Receive a personalized guide on starting and maintaining an urban garden. This includes tips on what plants to grow, planting times, plant care, and how to deal with common pests and diseases.

- AR Garden Planning: Use augmented reality to virtually plan and visualize a garden in the actual space. See how different plants would look and fit, and receive suggestions on optimal plant placement for growth.

- Plant Recognition: Identify plants by taking a picture, which is especially useful for identifying and dealing with weeds or unknown plants.

- Sustainability Tips and Challenges: Receive daily sustainability tips and participate in regular challenges (e.g., zero waste week, vegan month) to engage and motivate sustainable practices.

- Community Feature: Connect with other urban farmers, share progress, ask questions, and exchange tips.

- Marketplace: Trade homegrown produce, seeds, plants, and gardening equipment.

- Progress Tracking and Notifications: Monitor the growth of your plants and receive reminders for watering, fertilizing, or other care steps.

- Garden Health Check: Use your phone's camera to detect common plant diseases or pest infestations, offering solutions to keep your garden healthy.

- Sustainability Impact Calculator: Track and visualize the impact of your urban gardening on your carbon footprint.

TECHNOLOGY STACK

• Mobile Development: Flutter or React Native
• Backend: Node.js or Python (Django or Flask)
• Database: MongoDB or PostgreSQL
• AR: ARCore or ARKit
• Plant Recognition: Custom ML model using TensorFlow or PyTorch

USAGE

EcoHabit is designed for city dwellers who want to grow their own food, live more sustainably, and connect with like-minded individuals. By leveraging AR and machine learning, it provides an engaging way for users to start and manage their urban garden.

ADDITIONAL INFO - Why Do We Believe in EcoHabit?

Market Research - Global

- The global market for urban farming is growing rapidly. It is expected to reach $15.5 billion by 2025. This growth is being driven by a number of factors, including the increasing demand for locally grown food, the rising cost of food, and the growing awareness of the environmental benefits of urban farming.

- Sustainability is becoming increasingly important globally. In 2021, sustainably

sourced food and renewable energy were among the top sustainable trends.

- There is a growing trend of people wanting to live more sustainably. Urban farming can help to reduce food waste, improve air quality, and reduce the urban heat island effect.

- There is a growing population of urban dwellers. The global population is becoming increasingly urbanized, and this trend is expected to continue in the future. This means that there will be more people living in cities, and these people will be looking for ways to grow their own food.

- There is a growing number of startups and businesses that are focused on urban farming. This shows that there is a strong demand for urban farming products and services.

- The food industry/agriculture is responsible for 25% of emissions, and sustainable food consumption through finding meat and fish alternatives, reducing consumption, and sourcing food locally can help reduce the environmental impact.

- The global urban farming market size was USD 129.63 billion in 2021 and is expected to reach USD 203.67 billion in 2027, exhibiting a CAGR of 7.82% during the forecast period.

Market Research - Lebanon

- The demand for locally grown food is increasing. Imported food can be expensive and of lower quality. Urban farming can help to meet this demand by providing fresh, locally grown food to city dwellers.

- The cost of food is rising. This is due to a number of factors, including the country's economic crisis, the war in Ukraine, and the global supply chain disruptions caused by the COVID-19 pandemic. Urban farming can help to reduce the cost of food by providing city dwellers with the opportunity to grow their own food.

- There is a growing awareness of the environmental benefits of urban farming. Urban farming has a number of environmental benefits, including reducing food waste, improving air quality, and reducing the urban heat island effect.

- The Lebanese government is supportive of urban farming. The Lebanese government has a number of policies in place to support urban farming, such as providing subsidies for urban farmers and providing tax breaks for businesses that invest in urban farming.

- There is a strong community of urban farmers in Lebanon. Some supporting organizations provide resources, training, and support to urban farmers.

- These factors show that urban farming has a number of benefits, both for individuals and for the environment. We believe that EcoHabit has the potential to be a successful startup.

- It has a strong product offering, a supportive market, and a growing community of urban farmers. We are confident that EcoHabit will make a significant contribution to the urban farming movement, as it is helping to make urban farming more accessible

and affordable, and this makes it a valuable asset to the community. 4