Research Article

F&V Scanner: A Novel Approach to Gain A Deeper Understanding of the Product

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Abstract: *Agriculture plays a crucial role in ensuring food security and meeting the demands of a growing global population. With the advent of technological advancements and increased consumer interest in sustainable and healthy food options, agricultural applications for consumers have gained significant attention. Several agricultural applications can give benefits farmers to manage their farms but only fewer applications for consumers. So, we came out with the idea of making an application called F&V scanner. 'F' stands for fruit and 'V' stands for vegetable can be scanned through a smartphone by using this application. Its function is to allow consumers to track and analyse control price by location, freshness and ripeness of fruit and veggies, qualities, nutritional information even the app also can even predict the variety and origin of the fruit. Agricultural technology serves customers by improving food quality, safety, and traceability, in addition to increasing productivity. Consumers are increasingly wanting greater transparency and control over their food choices, which has resulted in the development of a variety of applications that bridge the gap between farmers and consumers. These programmes provide essential information to consumers regarding the origin, production techniques, and quality of the products they eat. Consumers may track the whole course of their food, by utilising technology such as blockchain, Internet of Things (IoT), and smartphone applications. This improved traceability encourages trust and empowers consumers to make informed decisions about their dietary preferences, nutritional needs, and ethical concerns.*

Keywords: applications, fruit, vegetable, nutritionist

1. INTRODUCTION

Since several years ago, the market for mobile applications has been growing rapidly, and nothing appears to be impeding this development. Even though it seems like there are already applications for everything, the industry occasionally shocks us with new products. Agriculture is one of them. Additionally, as AI and IoT technologies are evolving quickly, apps must continually adapt to

them. Additionally, software must suitable and cater to human demands in every aspect of life. The critical role that agriculture AI applications play in assuring food production, enhancing crop yields, and encouraging sustainable farming methods gives them enormous commercial worth. Large volumes of data, including nutrition value, size and colour of the fruit, location, mapping and historical farming data can be analyzed by AI systems. AI can offer insights and forecasts about crop yields, disease outbreaks, ideal planting periods, and more by processing this data. Using this data, the user may optimize their operations by making data-driven decisions.

2. METHOD

The transformative of the scanner application is made by using AI application to create the better function of the apps. All the needs that are demanded from consumers are included in just one application that is easier for the consumer. Consumers can use the application by the time they want to get information about the product directly. The consumer often uses different applications or use google to get information on product demand, sometimes the app not giving accurate data to them. So, the F&V Scanner is the most appropriate application to use to get all the data information needed such as the value of price product, the nutritional value, and others.

This F&V Scanner application is very easy to use with just one click. Users can get this application by downloading it from google play or the app store. Then the user needs to sign up or register by entering the required information and completing it. Next, users can use this application anywhere because every different location this application will directly detect.

Figure 1: *apps logo*

Figure 2: *scan fruit*

Figure 3: *what to know about fruit*

***Figure 4**: fruit information*

***Table 1:** Costs*

Manpower	The average salary of these expertise
Minimum 1 iOS developer	RM4000
1 android developer	
1 web developer	
1 project manager	
1 business analyst	
1 UI/UX designer	
1 QA tester	

3. FINDINGS

3.1 PROBLEM STATEMENT

Nowadays, there are several applications just came into being, and their design and functionalities were very basic. Today's app market is so abundant that it is difficult to choose only one product. Back then, the main functions were based on simple data storage, and today it is just one of the multiple functions available on various software. For the time being, mobile products for agriculture are based on modern technologies such as on how to access information, traceability and the quality of product and safety.

So, we released these agricultural applications that provide consumers with easy access to information about the products and practices. The F&V Scanner apps are another widespread innovative agriculture digital product. They allow consumers to track and analyze control prices by location, freshness and ripeness of fruit and veggies, qualities, and nutritional information even the app also can even predict the variety and origin of the fruit. Overall, the information from this application empowers consumers to learn more about product options and helps the consumers make decisions about the product that they demand.

This F&V scanner application is an application that directly helps users not to be easily deceived by sellers in the market. This is because most traders use various tactics to sell their products by deceiving buyers. for example, the buyer wants to get fruit or vegetables of the highest quality but sometimes the seller deceives the buyer with the quality. The seller told the fruit, and the vegetable was the best grade, but it was the opposite. By the time this application really will help consumers in future.

4. DISCUSSION

4.1 BENEFIT

Discover how this innovation can contribute to consumers by using the F&V Scanner application. Through the transformative in the application that gives the potential to help consumers:

1. Optimal users' knowledge: The scanner application provides consumers with easy access to information about various fruit and vegetables in the market. They provide the detection of various types of fruit and vegetable. Several nutritional values also provide in the application to easier consumers make a better choice.

2. Product quality and safety: The application enables consumers to access information about the quality and safety of agricultural products. These include data on the nutritional content, ripeness of the product and product conditions. By having access to such information, consumers can make decisions on their personal preferences or maybe dietary requirements.

3. Personalized recommendation: Our agricultural applications can use data analytics and machine learning algorithms to provide personalized recommendations to consumers. This recommendation may include information about the locally available product, nutrition value, current market price by location and the quality of a product.

4. Food traceability: Agricultural applications can enable consumers to track the journey of their food from farm to fork. By scanning the product, consumers can obtain detailed information about the origin, the quality standards it adheres to and its nutritional value. This transparency can help consumers make choices aligned with their preferences and values, such as supporting local and sustainable agriculture.

5. Engagement: The seller should actively engage with the system. For example, to update new information data about a product such as the price of following the control price of a product set by the government and the location nearby to get the product.

5. CONCLUSION

In conclusion, agricultural applications will remain relevant to consumers in the future due to their role in ensuring food security, awareness of rights, promoting sustainable practices, ensuring food quality and safety, providing traceability, and driving innovation and convenience in the agricultural sector. Agriculture plays a crucial role in providing food and other essential products to meet the growing global population's needs. We hope that our application innovation could help and give benefit both farmers and consumers.

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