

ABSTRACT

Chili is an agricultural commodity that is perishable and susceptible to price fluctuations, primarily due to an imbalance between supply and demand. This uncertainty poses a significant challenge for farmers in managing the production and distribution of their harvest. The objective of this research is to design the user interface for a web-based interactive dashboard for a smart farming system for chili plants. This dashboard is designed to visualize real-time data from other research regarding soil and plant conditions, such as moisture levels, temperature, and nutrients, as well as to support image classification for detecting plant health conditions. Using the Design Thinking approach, which involves five stages (empathize, define, ideate, prototype, and testing), the system is intended to assist farmers in data-driven decision-making, enhance land management efficiency, reduce the risk of crop damage, and sustainably increase productivity.

The research results show that the implemented interface design obtained an average System Usability Scale (SUS) score of 85.08, indicating a very good level of usability. The testing also produced relevant findings that formed the basis for design iterations to refine functionality, thereby providing a practical solution that supports the transformation of the agricultural sector towards being more modern and efficient. The system's implementation proved successful in providing ease of data access and has the potential to accelerate the adoption of smart farming technology among farmers.

Keywords— design thinking, interactive dashboard, smart farming