



Smart Feather algae farm

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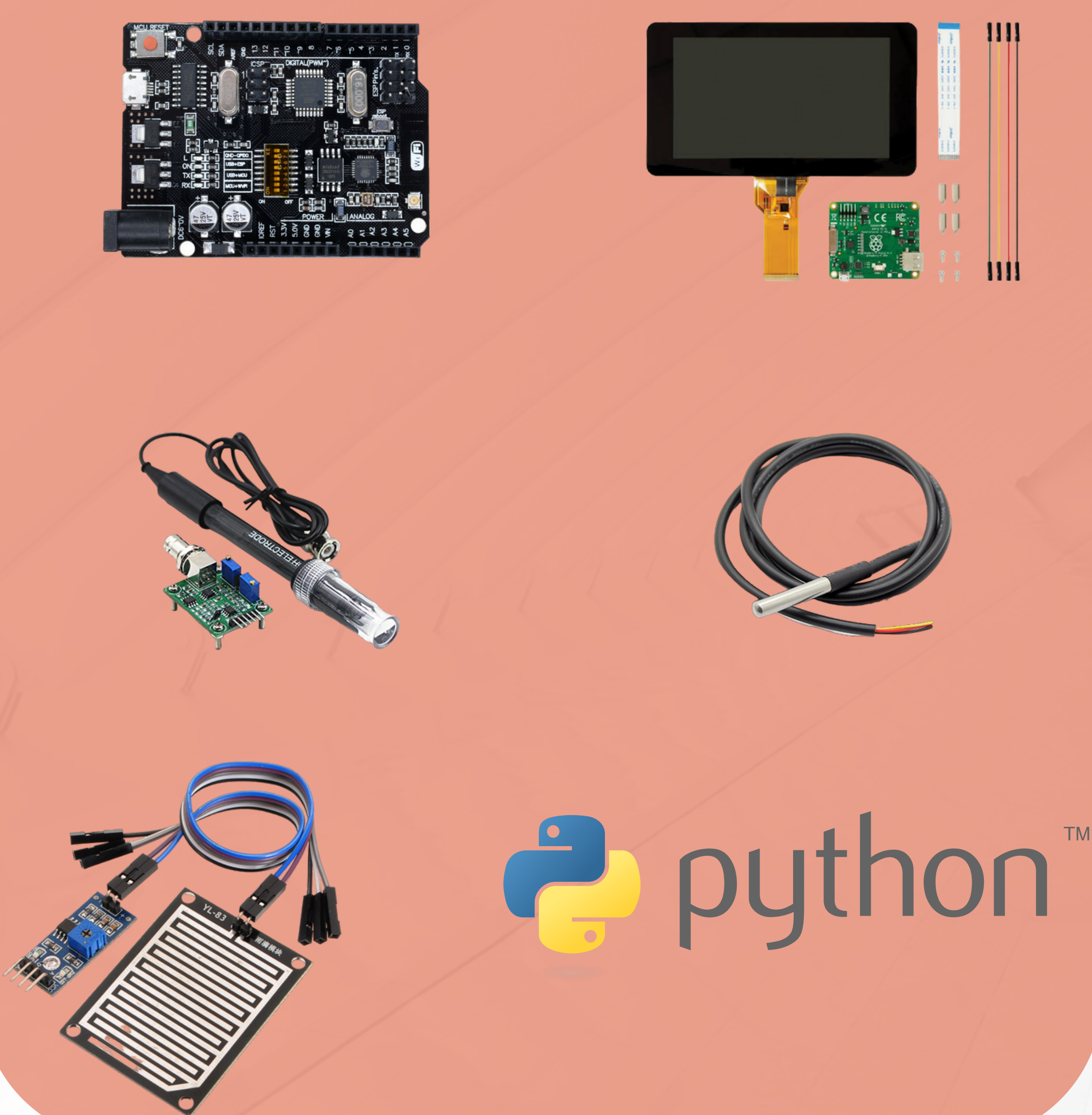
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Abstract

This research aims to create a feathered algae farm system capable of increasing the weight of feathered algae. It also aims to study the growth of algae cultivated within the feathered algae farm system compared to conventional algae cultivation methods. This is achieved by employing Arduino and Raspberry Pi boards connected to sensors to monitor water temperature and pH levels, adjusting the water conditions to suit the optimal growth of feathered algae. Additionally, a system is implemented to regulate temperature to facilitate breeding or halt the growth of algae by adjusting settings via a touch screen display. Due to limited available data on feathered algae, growth data is collected using the Raspberry Pi Camera Module 3 through a camera to store information. Furthermore, an alert system for whitening of algae is developed to notify owners, enabling them to investigate and address the cause.

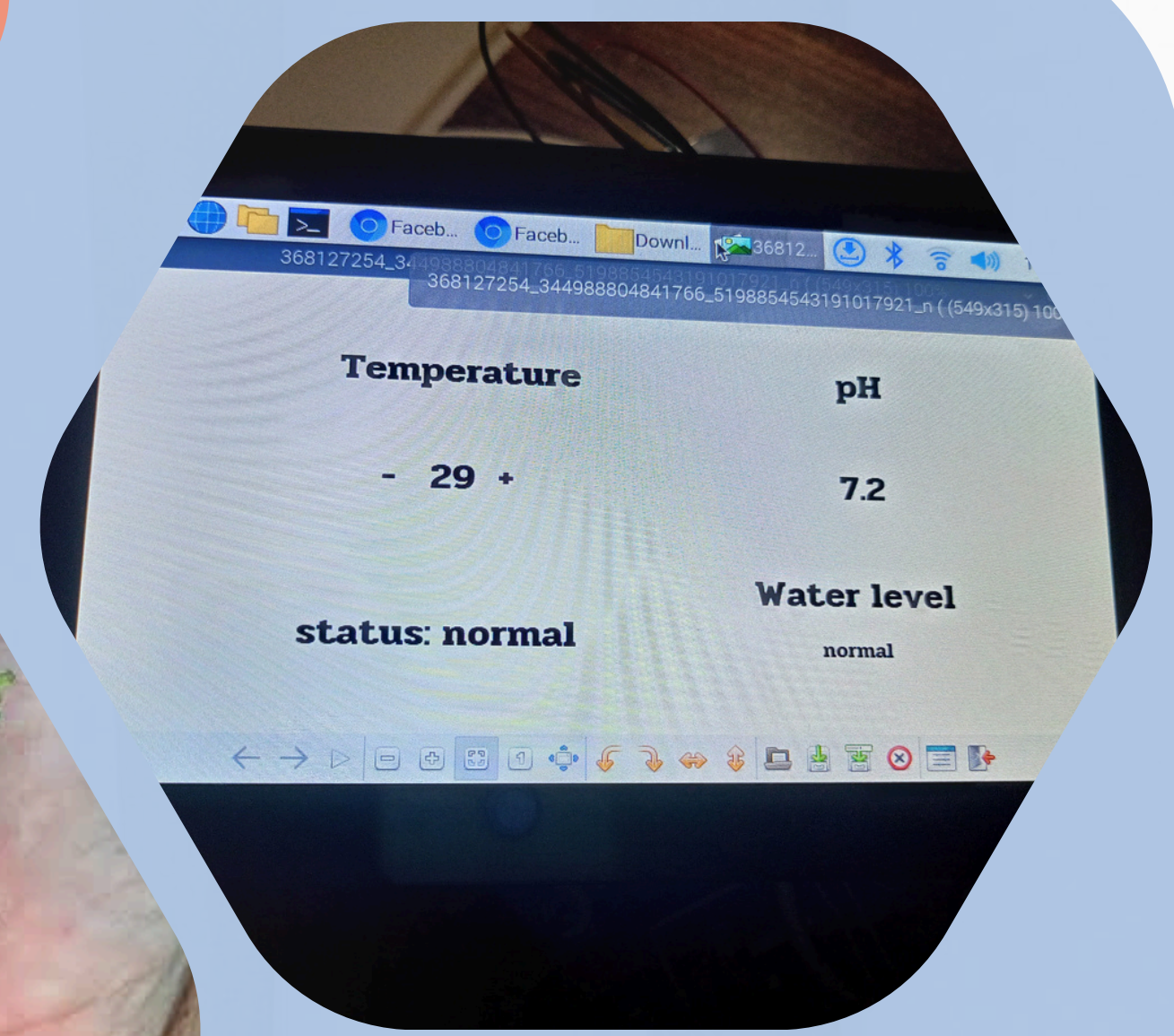
Method



Objectives

1. Create a system to farm feathered algae.
2. Study how well feathered algae grow in a smart farm setup.

Result



Conclusion

From experiments using the feathered algae farm system compared to conventional cultivation, it was found that cultivating in the feathered algae farm system can significantly increase production. This method allows for an increase in algae weight by grams and enables control of the water's pH level at an appropriate range. Additionally, it leads to year-round production of feathered algae compared to conventional methods, which are typically only harvestable during the warm season.