

Designing a Fully Automated Pot for Gardeners and a Survey on the Use of the Features to the Consumers

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This research introduces a new design for an automatic plant caring system which can be used for planting herbs, vegetables or ornamental plants as per consumers' choice. At present, people are accustomed to purchasing vegetables and fruits from the market, and it seems that only a few people supply their food from their own garden. Many researches have been carried out parallel to this subject on separate features such as automatic watering, automatic fertilizing, and pest and weed controlling and automatic lighting system. A survey on the difficulties faced by horticulturists and the importance of automatic plant caring systems was done by selecting people chosen at random. The age of the selected group ranged between 10-80 years. Result of the survey was analyzed. Moreover the features included in this design and the priority given by the gardener for the highest price that wishes to purchase such items was evaluated in the survey. Majority of the people have requested the item for a price less than 1000 rupees. By evaluating the survey, most of them concluded that there was no time for gardening to be a major problem. Problems other than that were pests, weeds and climate issues. Most people request automatic water supply, pest and weed control and automatic fertilizer as the features included in the automatic plant caring system. In this research, appropriate design of automatic plant care system was also introduced using software. This system is designed to use drip hydroponic technique where fertilizer is supplied via water by dripping plant roots into a tank. When there is no sunlight, light is automatically supplied using the LED panel. The purpose of this work is to show how someone can easily engage in gardening and use this device to supply fresh vegetables and fruits. Similarly, this pot can also be used as a decorative item by planting ornamental plants.

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