

Exploring the Effectiveness of Robotic Companions Through the Use of Symbiotic Autonomous Plant Care Robots

Authors : Angelos Kaminis, Dakotah Stirnweis

Abstract : Advances in robotic technology have driven the development of improved robotic companions in the last couple decades. However, commercially available robotic companions lack the ability to create an emotional connection with their user. By developing a companion robot that has a symbiotic relationship with a plant, an element of co-dependency is introduced into the human companion robot dynamic. This companion robot, while theoretically capable of providing most of the plant's needs, still requires human interaction for watering, moving obstacles, and solar panel cleaning. To facilitate the interaction between human and robot, the robot is capable of limited auditory and visual communication to help express its and the plant's needs. This paper seeks to fully describe the Autonomous Plant Care Robot system and its symbiotic relationship with its botanical ward and the plant and robot's dependent relationship with their owner.

Keywords : symbiotic, robotics, autonomous, plant-care, companion

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