

Honors Research Project Proposal

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Title of Proposed Project: Garden Bot	
Major: Computer Engineering	Graduation (semester/year): Summer 2022

Please include a brief (maximum 200 words) summary of your proposed project

With frequent weeding being a tedious chore and an essential task for a successful garden, there is need for an automated method of handling this routine. Existing technologies utilize computer vision, GPS, multiple units and other tools to remove weeds from garden plots. However, these solutions are often complex and expensive, suited for large agricultural plots in contrast to small-scale home gardens. In addition, many of these technologies, along with manual tillers and cultivators suited for home use, are unable to perform weeding within rows of crops in a process known as intra-row weeding. The Garden Bot is an autonomous, weed removal robot that will operate in home vegetable gardens. This device can manage the responsibility of clearing a garden of weeds with limited user interaction, making use of energy harvesting to maintain device power. Garden Bot operates between and within rows of crops, without harming any productive plants in the process. Engineering analysis was performed on the project subsystems in order to determine the required metrics of the robot to be used during parts selection.

Approval:

Honors Course No.: 4450 401	No. of Project Credits: 3.00
Honors Project Sponsor Signature/Date	
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Your approved cover sheet and proposal must be [submitted to the Williams Honors College through IdeaExchange](#)