



# TrimBot2020



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The TrimBot2020 project researches the robotics and vision technologies to prototype the first outdoor garden trimming robot. The robot will navigate over varying terrain, approach rose bushes, hedges and boxwood topiary, to trim them to an ideal shape. The robot will be based on a modified Bosch Indego robot lawnmower, which will navigate using a user-defined garden map and 3D scene analysis, and then visually servo a novel electric plant cutter.



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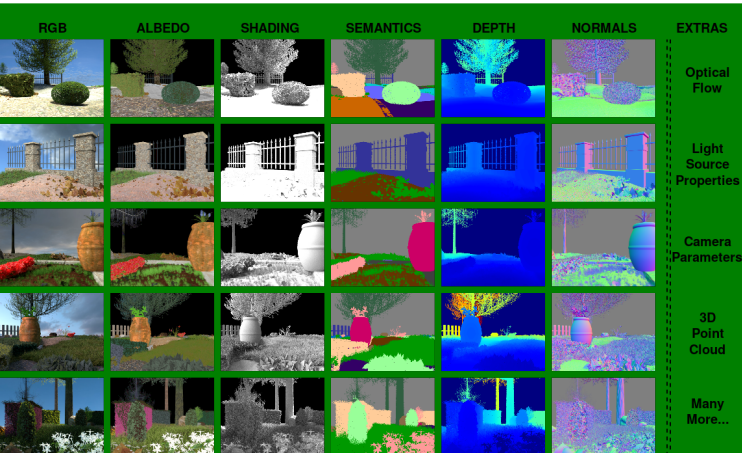


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University of Amsterdam (UvA) is responsible for 3D Data Analysis and Scene Understanding tasks. UvA provides generically useful and garden scene-specific shape and surface representations. The shapes, their descriptions and their locations will be used for robot localization, navigation, task planning and task execution. Main objectives include recovering of object albedo and illumination from RGB-D, semantic 3D representation of the garden based on semantic

segmentation and object detection, computing the traversability of the garden, and 3D completion of occluded parts. For the tasks, UvA provides the largest dataset of synthetic images of natural environments.



European Commission

[www.trimbot2020.org](http://www.trimbot2020.org)

