Lawn Vision

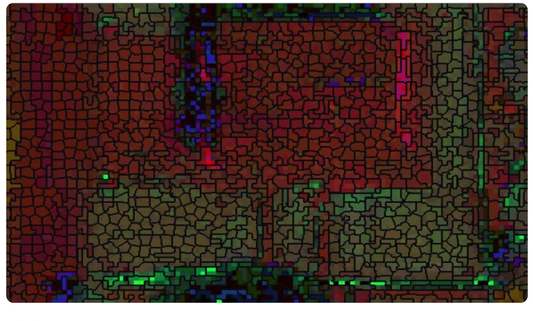
Virtually estimating your lawn size

Lawn Vision is the first ever service to use computer vision on satellite imagery to produce an accurate representation of your lawn.

try it yourself: porch.com/capstone

1 Polygon Masking

Get property coordinates and address information using King County and Austin datasets to mask a bounding box on a satellite image.

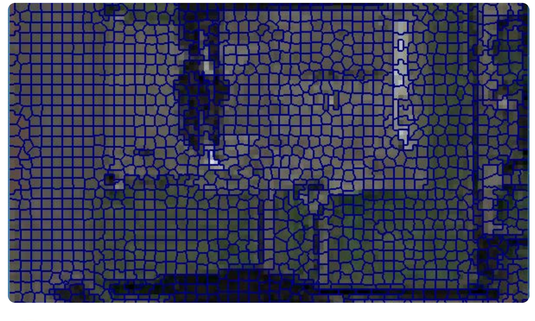


2 HSV Predictions

Predict whether each pixel should be classified as lawn based on hue, saturation and value color space.

3 Erosion & Dilation Filter

Minimize false positive rate by filtering isolated pixels out of initial predictions.



4 Lawn Segmentation

Segment image by clustering and remove false negatives from predictions by comparing neighboring groups to find missing patches of lawn.

Analyzing Impact on Lawn Services

Compared to lawn area based on lot size*

50
houses in Seattle tested

15%
average error rate

30%
more accurate than lot data*

Tools and Technologies

Successfully deployed in Porch's Infrastructure

React · Node Js · SQLite · OpenCV · Python · Sketch

Information School | UNIVERSITY of WASHINGTON

Porch

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