

Article

Toward a computer vision perspective on the visual impact of vegetation in symmetries of urban environments

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This appendix contains the structure of the virtual RGBD-green city dataset provided by Unity game engine with RGB images of virtual urban street views with various amount of annotated vegetation and a ground truth depth map available at <https://uabox.univ-angers.fr/index.php/s/eG2fDXV3PIEztOn>, <https://uabox.univ-angers.fr/index.php/s/eG2fDXV3PIEztOn>.

1. Supplementary Material

The dataset contains 10 different experiments where 300 high resolution images (879×1680 pixels) are generated under different percentage of vegetation. These virtual cities were created using the Unity game engine with freely available models of trees and urban blocks. The data include the segmentation of the vegetation to compute the percentage of vegetation and the depth map. Figs. 1–9 illustrate the content of the virtual RGBD green city dataset with as first row examples of RGB images, second row ground-truth depth, and last row annotated images with different percentage of vegetation.

Several experiments are proposed in the virtual RGBD-green city dataset in order to contribute to the understanding of the impact of vegetation in images via computer vision tools. This includes positioning trees on one side or on both sides of the street, positioning trees with trees with various orientations or a single vertical orientation, using a tree with different sizes, or using a variety of trees.

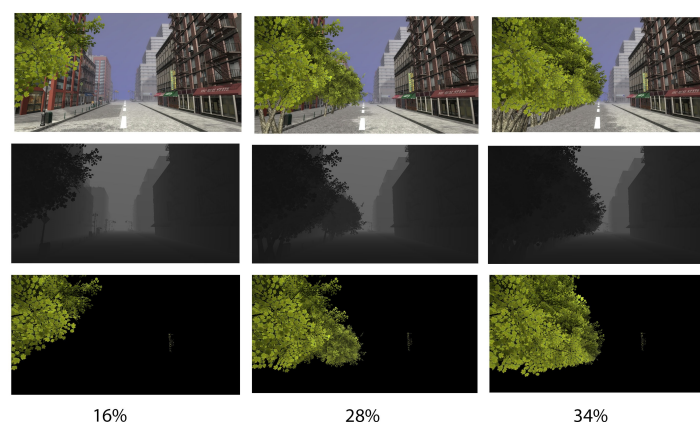


Figure 1. Example of a scene with same tree same size different orientations one side.

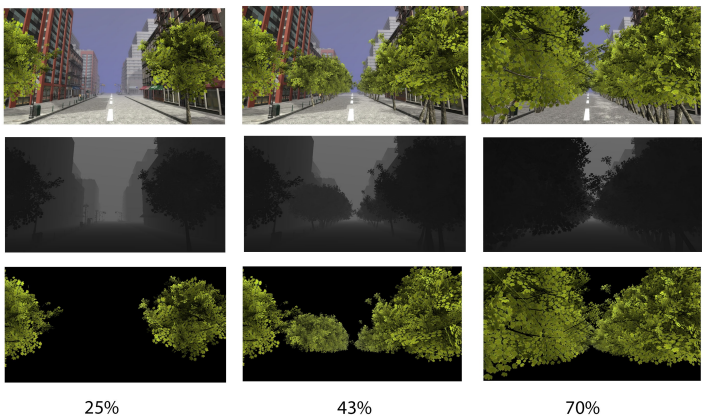


Figure 2. Example of a scene with same tree same size different orientations two sides.

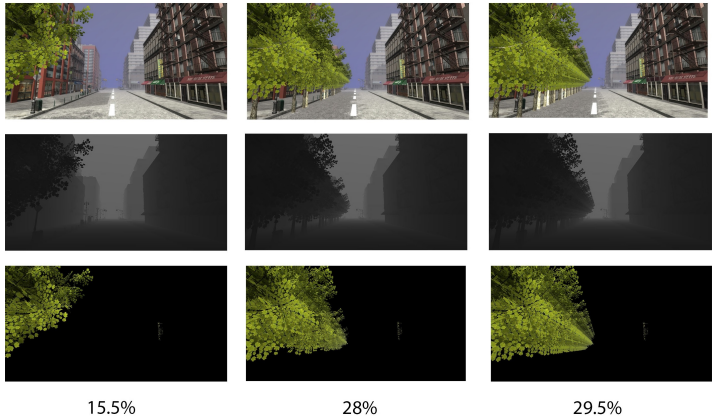


Figure 3. Example of a scene with same tree same size same orientation one side.

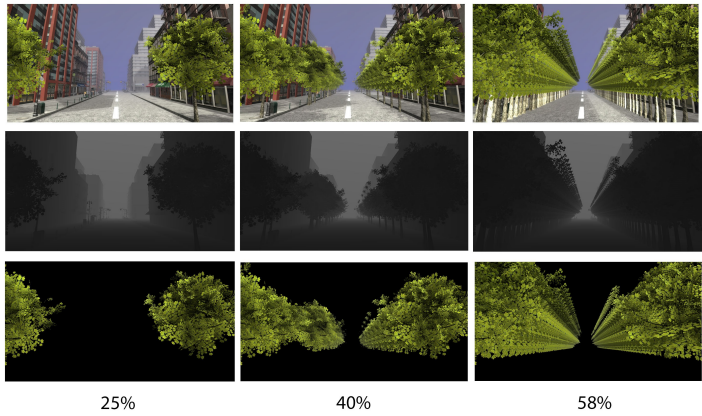


Figure 4. Example of a scene with same tree same size same orientation two sides.

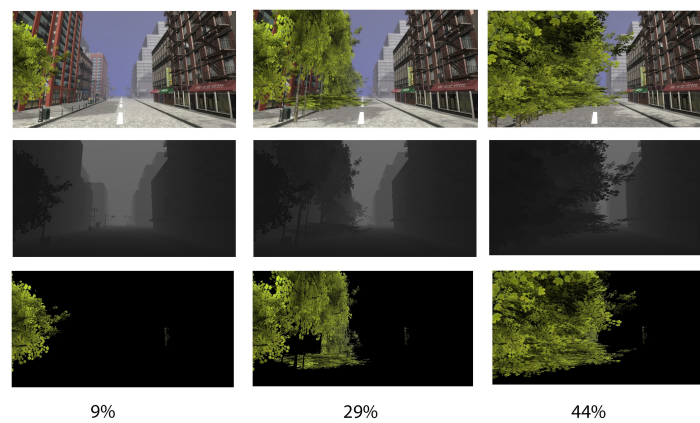


Figure 5. Example of a scene with same tree different size same orientation one side.

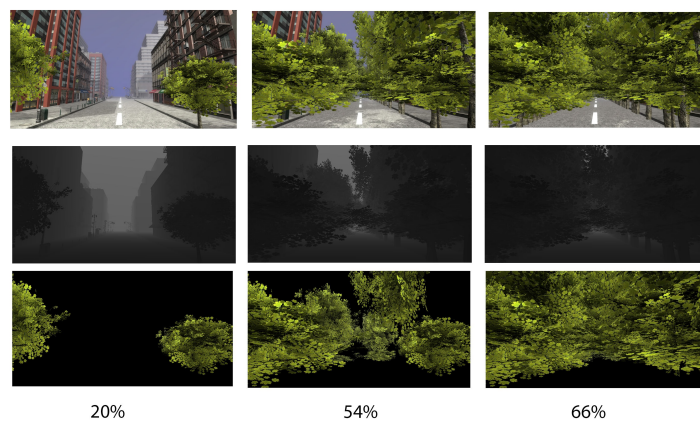


Figure 6. Example of a scene with same tree different size same orientation two sides.

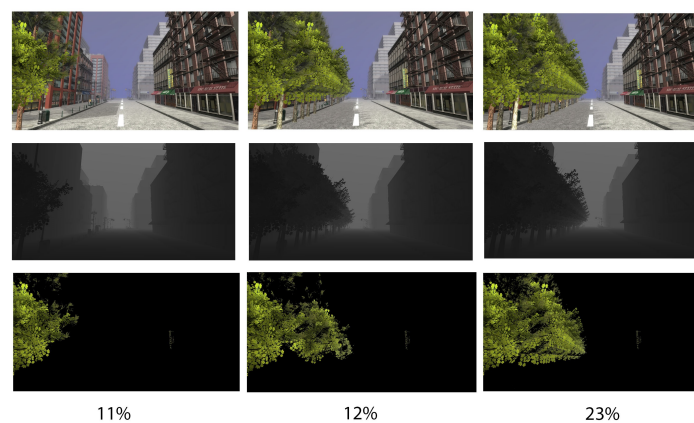


Figure 7. Example of a scene with different trees same size same orientation one side.

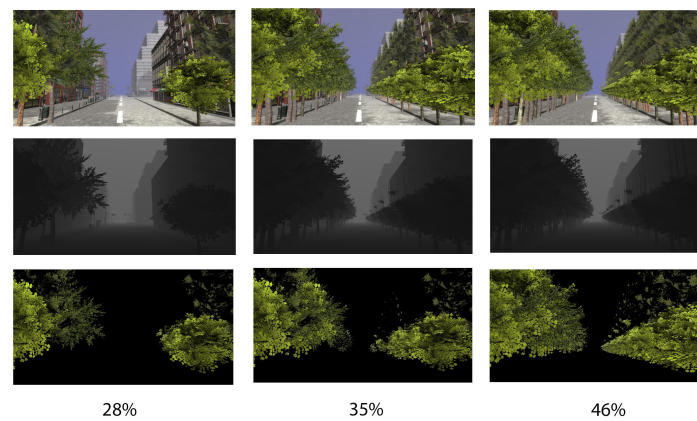


Figure 8. Example of a scene with different trees same size same orientation two side.

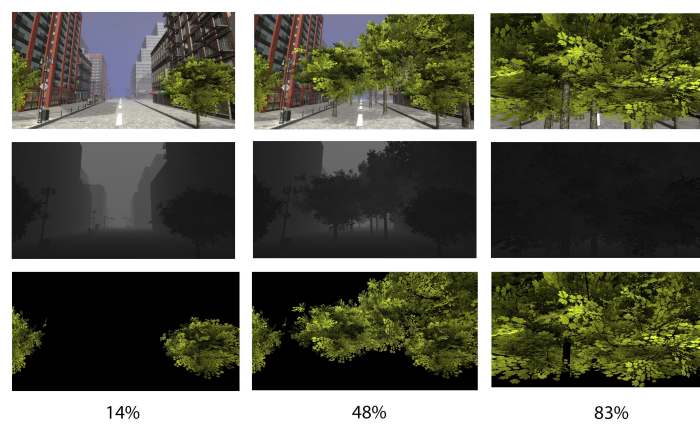


Figure 9. Example of a scene with forest-like positioning of trees.



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