



Il progetto di tesi prevede la creazione di un plugin Blender in grado di generare automaticamente immagini realistiche di frutta da utilizzare nell'addestramento di modelli di IA. Le immagini sono automaticamente etichettate e segmentate.

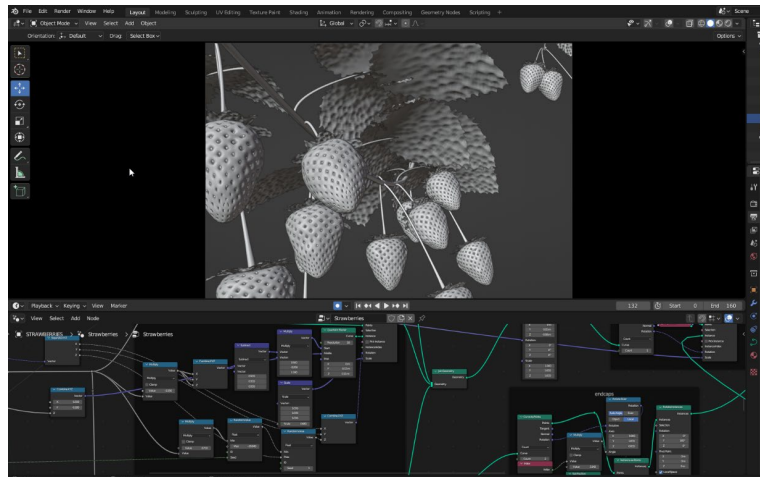
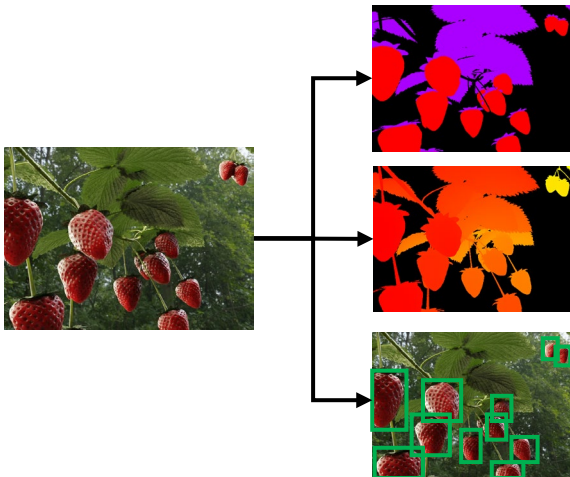


The thesis aims to create a tool within Blender that can automatically generate realistic images of fruit for use in AI applications. These images will be automatically labeled and segmented, making them ready for immediate use in training AI models

Detailed Activities

The plugin will be able to:

- **Render scenes:** Create photorealistic images from 3D models of fruit and their surroundings.
- **Save images:** Store the rendered images in a format suitable for AI training.
- **Automatically label images:** Add labels to the images, identifying the different elements within them (e.g., "apple," "leaf," "branch"). This includes:
 - **Bounding boxes:** Drawing boxes around objects in the images.
 - **Depth maps:** Creating images that show the distance of each object from the camera.
 - **Semantically segmented images:** Creating images where each pixel is colored according to the type of object it represents (e.g., all pixels belonging to an apple are colored red, all pixels belonging to a leaf are colored green).



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