

Tracking and Counting Apples in Orchards Under Intermittent Occlusions and Low Frame Rates

Supplementary Material

1. Datasets

1.1. Sample video frames

Figure 4 illustrates some of the video frames of each dataset used in this paper. The frames are not necessarily consecutive — to illustrate better the camera movement in very few frames, to fit in a page, we selected some frames further apart — but they are sequentially ordered as they appear in the video.

In the first, second and fourth datasets, the camera generally moves from left to right (hence, the trees in the video appear to move from right to left), and in all of them except the sixth, it also moves up and down.

In the third dataset, the camera generally moves from right to left (hence, the trees seem to move from left to right), but it also tilts up and down.

In the fourth dataset, the camera just moves in a straight line from left to right.

1.2. Camera trajectories

The following figures illustrate the camera trajectories in each real-world dataset used in this paper (the camera trajectory for the *Synthetic-apples-1* dataset is just a straight horizontal line). Cameras are represented as 3D pyramids. The points that can be seen in the background correspond to the sparse 3D reconstruction of the scene.

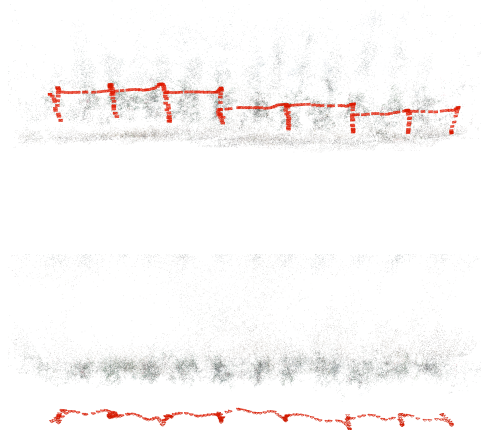


Figure 1. Camera trajectory in the Galafab-west dataset (front view and top view).

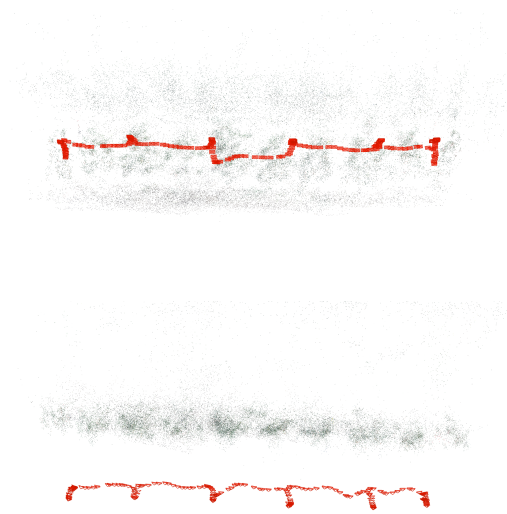


Figure 2. Camera trajectory in the Schniga-Schnico-west dataset (front view and top view).

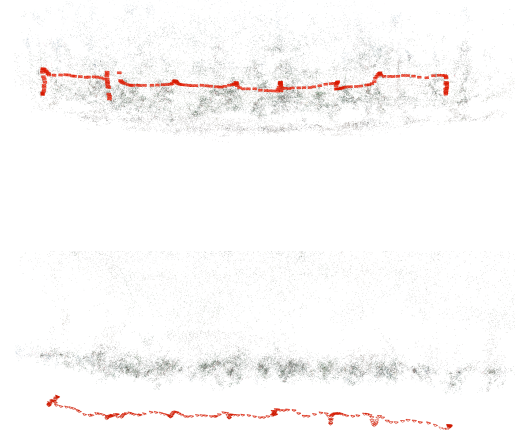


Figure 3. Camera trajectory in the Schnico-Red-east dataset (front view and top view).

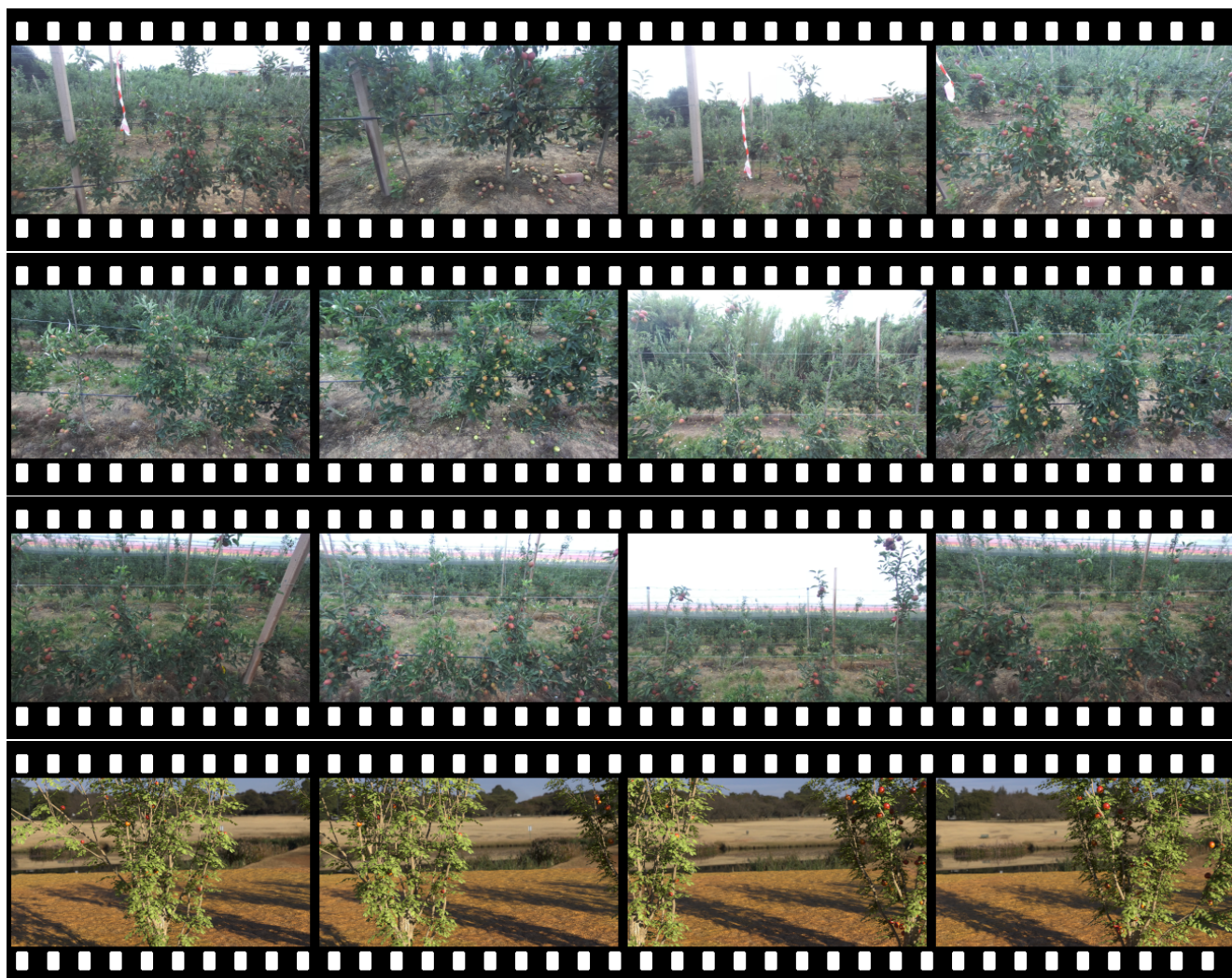


Figure 4. Sample video frames from the datasets Galfab-west, Schniga-Schnico-west, Schnico-Red-east, and Synthetic-apples-1, respectively. Each video is represented in a row with 4 frames.