Flow-Decoupled Normalized Reprojection Error for Visual Odometry

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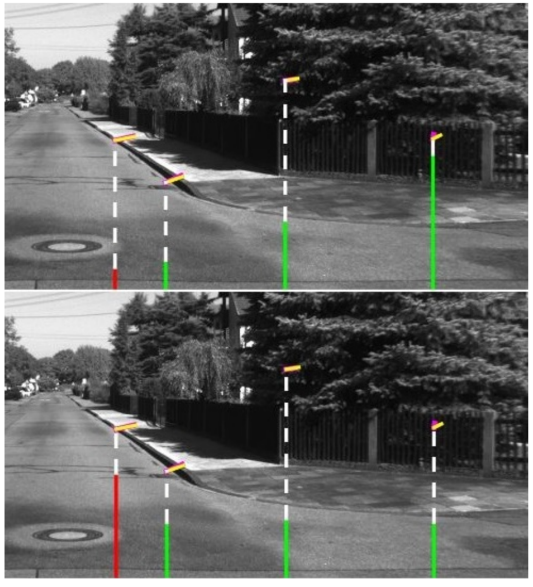

- Frame-to-frame feature-based ego-motion estimation using stereo cameras
- Current approach: Rotation and translation of the ego-motion in two separate processes
- An analysis of the characteristics of the optical flows and reprojection errors that are independently induced by each of the decoupled six degrees of freedom motion
- A reprojection error that depends on the coordinates of the features
- Decoupling the translation flow from the overall flow
  - Using an initial rotation estimate
  - Transforming the correspondences into a pure translation scenario
- Evaluated on KITTI, the best translation error of all camera-based methods