A Large Dataset to Train Convolutional Networks for Disparity, Optical Flow, and Scene Flow Estimation

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- Introduces a synthetic dataset containing over 35000 stereo image pairs with ground truth disparity, optical flow, and scene flow
- Synthetic dataset suite consists of three subsets
  - FlyingThings3D is 25000 stereo frames with ground truth data of everyday objects flying along randomized 3D trajectories
  - Monkaa contains nonrigid and softly articulated motion as well as visually challenging fur, made from the open source Blender assets of the animated short film Monkaa
  - The Driving dataset is comprises naturalistic, dynamic street scenes from the viewpoint of a driving car, made to resemble the KITTI datasets
- Demonstrates that the dataset can indeed be used to successfully train large convolutional networks