Real usage of motion reconstruction in animations

09/04/2024 Lin Cong

Real usage always includes multiple people under a moving camera

Human detection (YOLO)

Target tracking (Tracking anything based on SAM to get masks)

Camera tracking (ORB SLAM, dpvo)

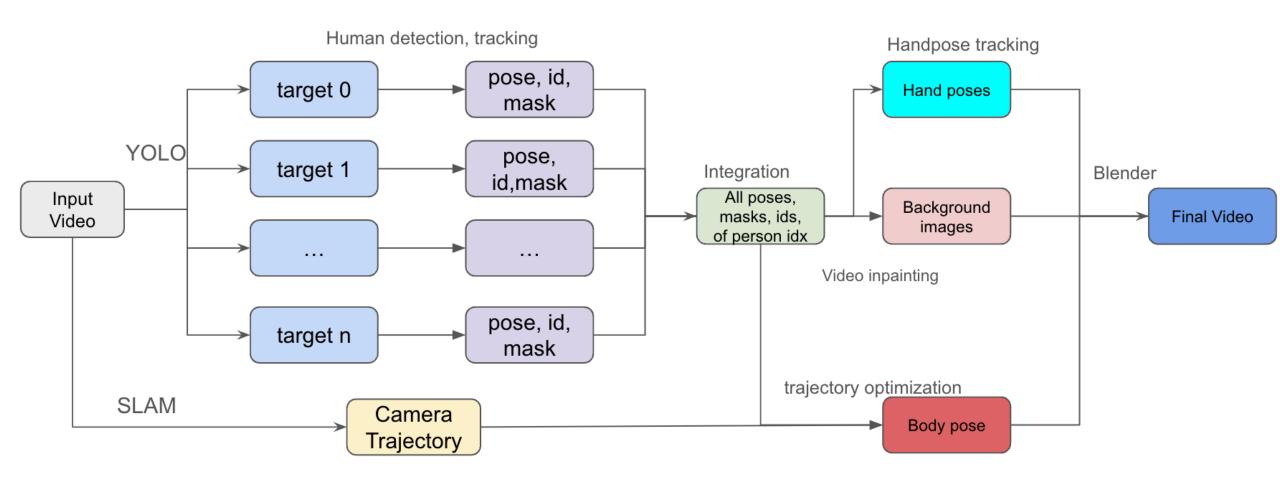
Motion Reconstruction (deep learning + trajectory optimization)

Video Inpainting (Transformer based model)

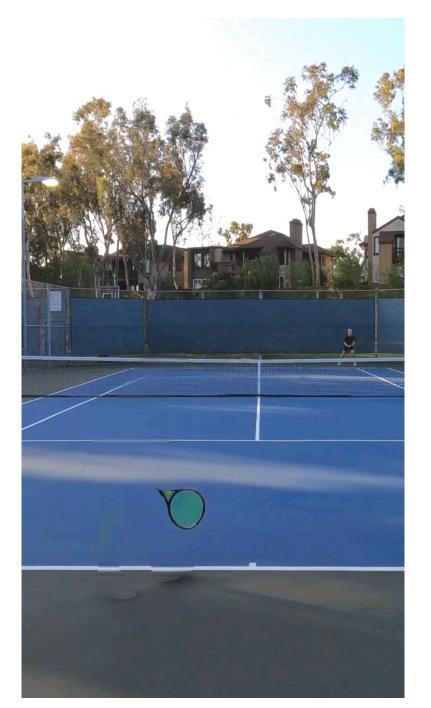
Retargeting (apply to different models)

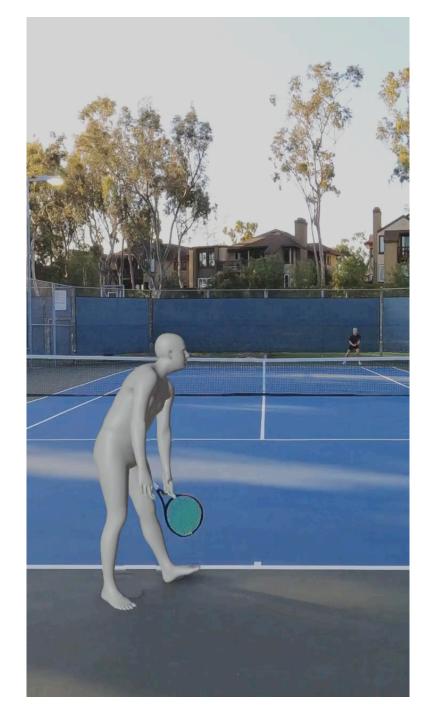
Composing/Rendering (lighting)

Working Pipeline





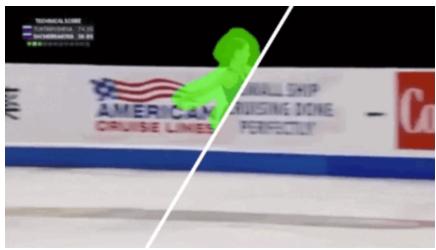




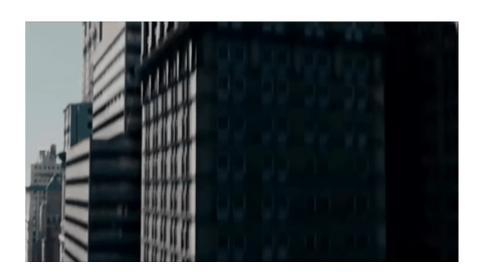


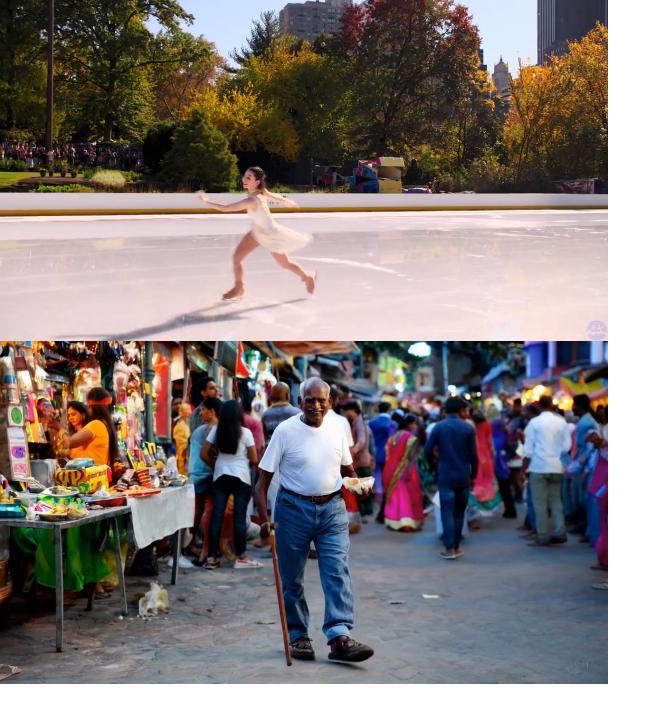
Video Inpainting

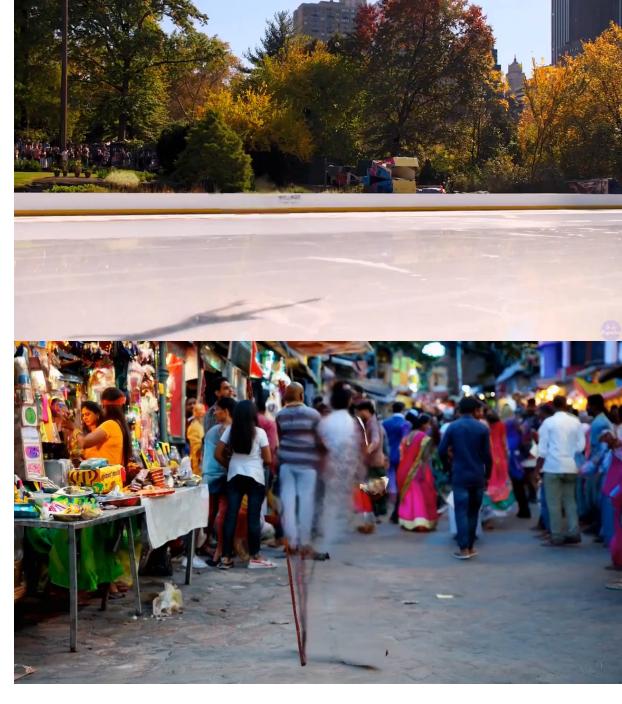
ProPainter: Improving Propagation and Transformer for Video Inpainting

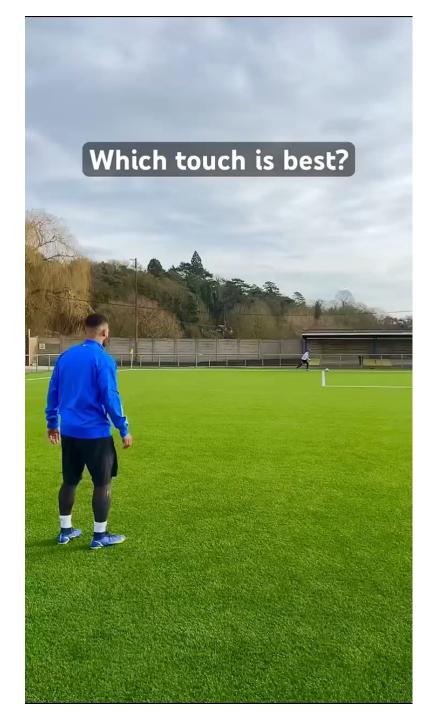


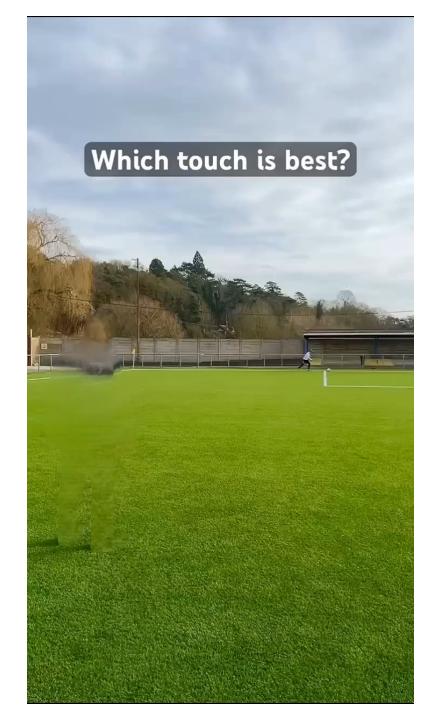




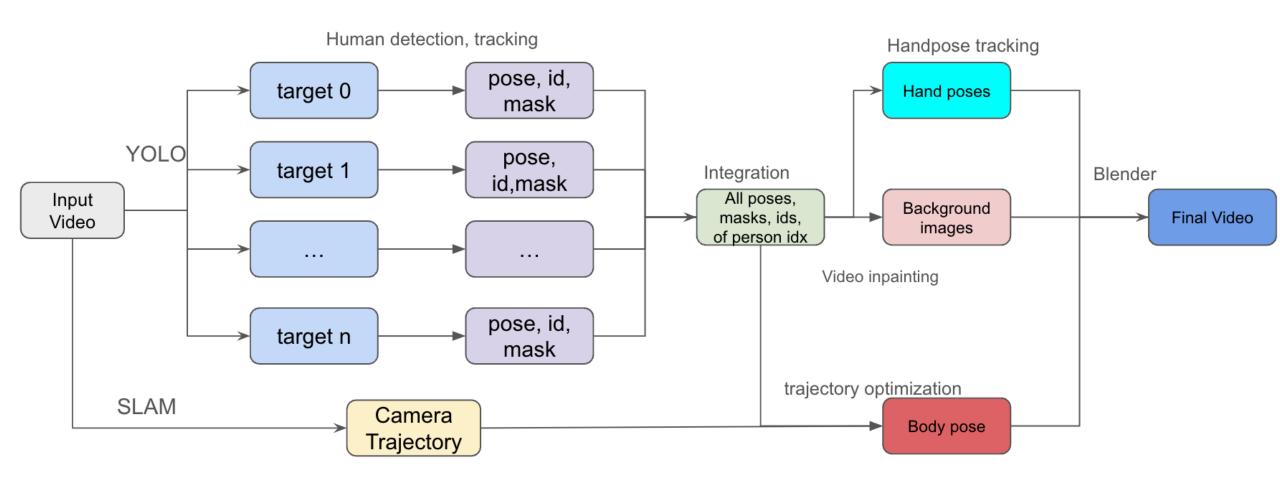








Move the camera tracking afterwards get better tracking results



Some extra results







