

EgoSim: An Egocentric Multi-view Simulator and Real Dataset for Body-worn Cameras during Motion and Activity

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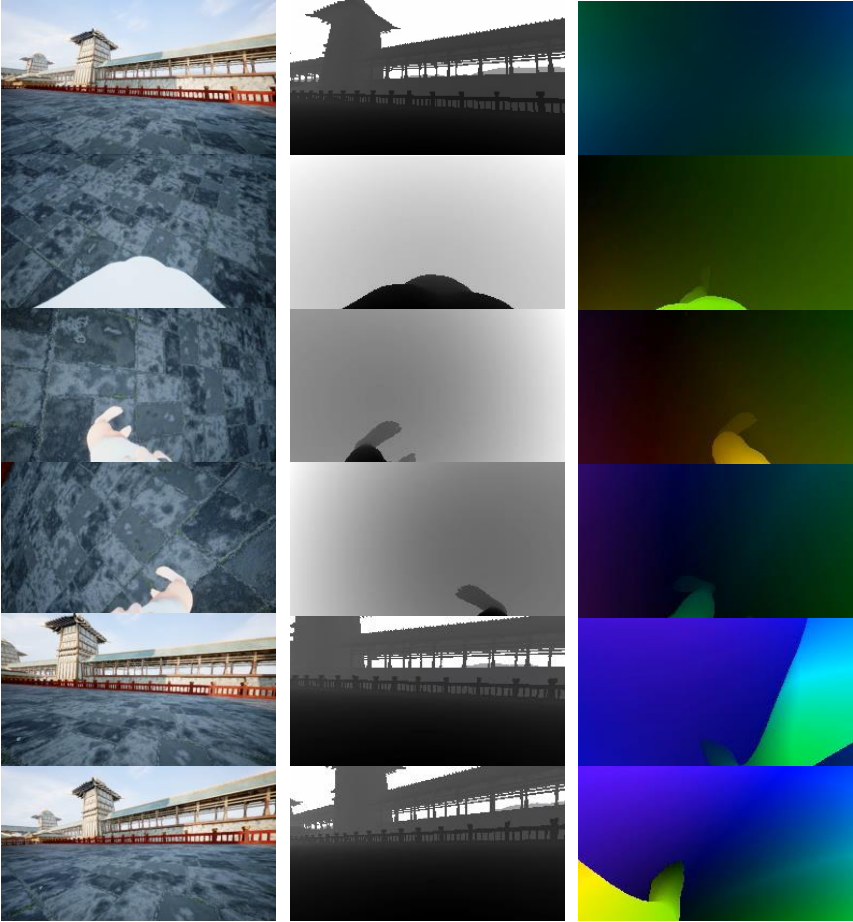
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EgoSim

- a novel simulator for body-worn cameras and human motion
- New dataset – MultiEgoView:
 - six body-worn cameras and ground-truth full-body
 - real-world motion data from 13 participants

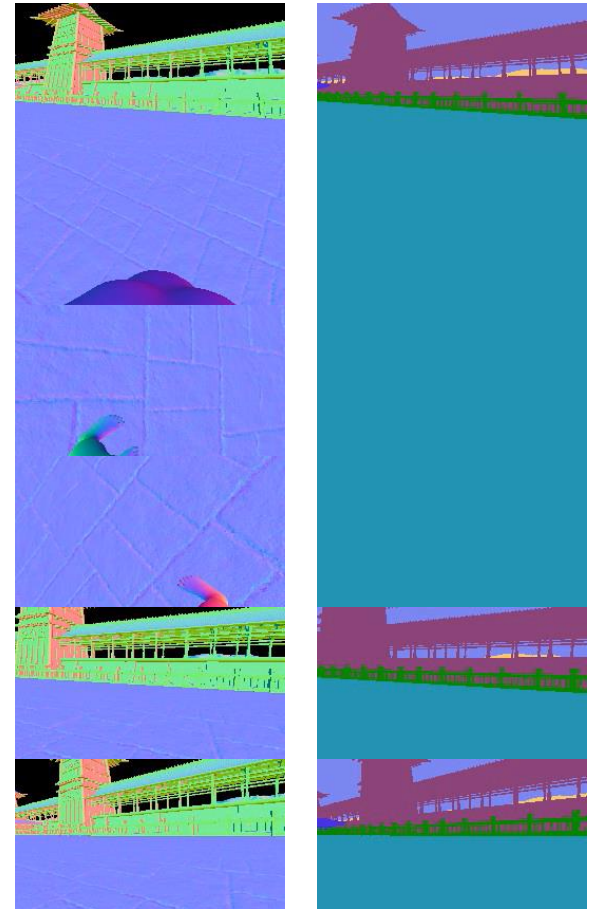


Multi-Person Data



EgoSim - Plattform

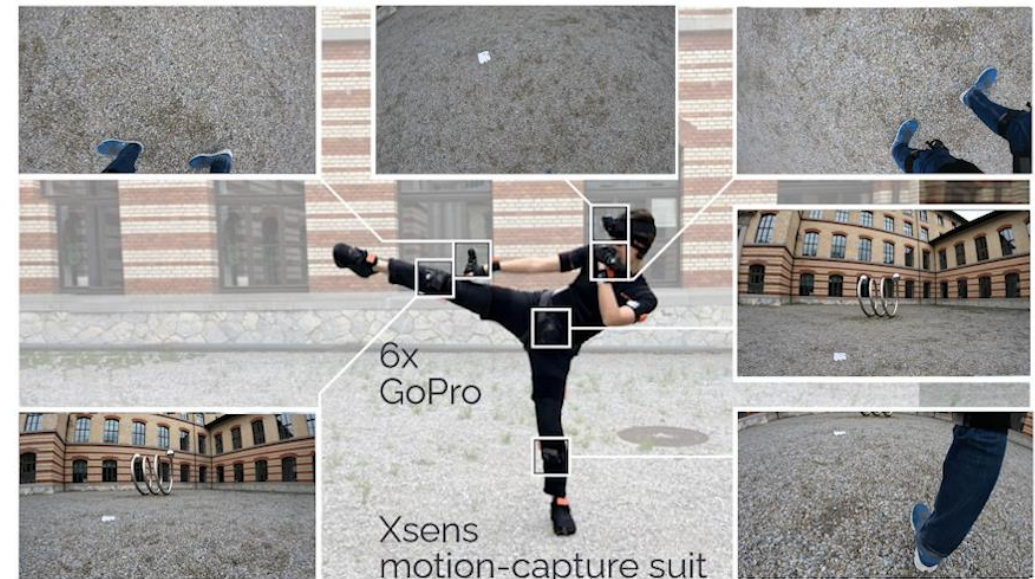
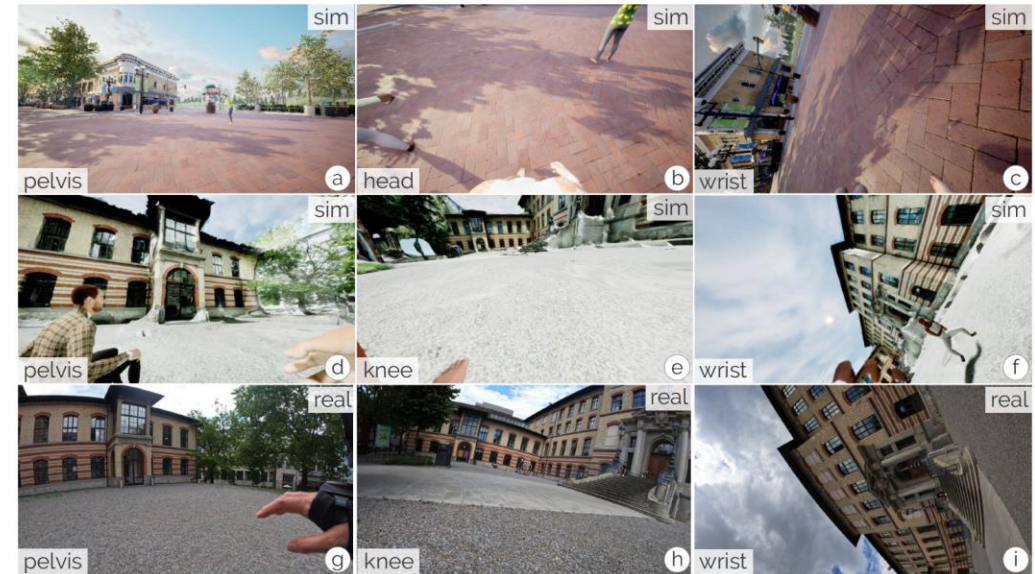
- Easy to use
- Flexible and customizable
- Real motion and motion artifacts
- Diverse assets
- Real multi human motion



MultiEgoView

- 119 hours of data
- 6 camera positions
- Four realistic environments
- Randomized character appearance
- Multi character scenes

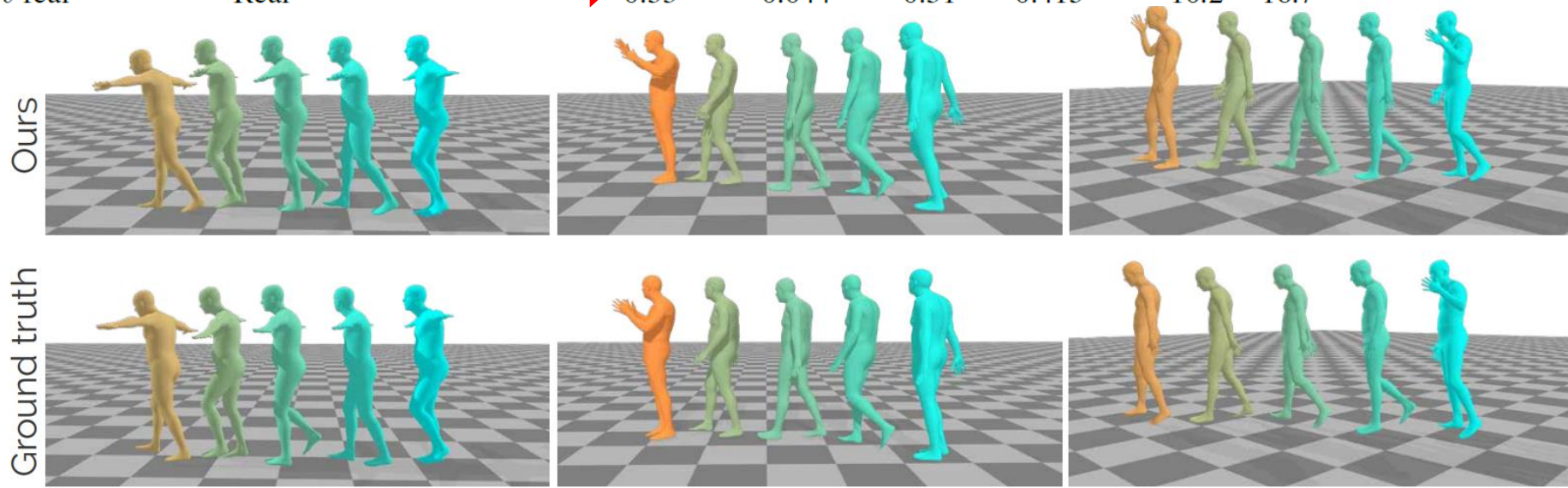
- 5h real camera data
- Xsense ground truth pose
- Motion type annotation



Multi View Pose Transformer

- MultiEgoView aids training for inference on real-world data

Method trained on	evaluated on	Global MPJPE ↓	PA-MPJPE ↓	MTE ↓	MRE ↓	MJAE ↓	Jerk
Synthetic	Synthetic	0.16	0.040	0.13	0.272	9.1	21.9
Synthetic	Real	0.77	0.119	0.71	0.947	29.0	20.9
Real	Real	1.23	0.087	0.79	1.030	16.4	1.5
<i>with fine-tuning:</i>							
Synthetic + 20% Real	Real	0.40	0.056	0.37	0.504	12.8	15.4
Synthetic + 80% real	Real	0.33	0.044	0.31	0.415	10.2	16.7



6 views

