FOCUS: Clustering Crowdsourced Videos by Line-of-Sight
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Motivation
Possible to infer camera pose precisely: deducing observer location + angle of view

Live Dashboard
Building 3D Reconstruction with "Structure from Motion"

FOCUS Challenges
Visually different, yet similar
Combining computer vision and sensing to match contextual similarity across time

Visually similar, yet different
Multimodal tracking using SfM + Gyroscope + Compass

From a known 3D geometry, can reason about shared content

Possible to infer camera pose precisely: deducing observer location + angle of view

FOCUS informs clustering on video streams with spatial and temporal correspondence

Combining computer vision and sensing to match contextual similarity across time

From a known 3D geometry, can reason about shared content