



# Computer Vision Applications

Why Computer Vision

- Self-Driving Cars
- Object Detection
- Reidentification
- 3D Reconstruction

3D reconstruction of rigid objects

Images  $\xrightarrow{\text{SfM}}$  3D shape

Image 1 Image 2 ... Image N  $\xrightarrow{\text{NR-SfM}}$  3D shape 1 3D shape 2  
... 3D shape N ~~2D~~

Template + Image  $\xrightarrow{\text{SfT}}$  3D shape

3D reconstruction of non-rigid objects

Why not? We can do :-

- Face Recognition
- Pose Estimation
- Smile Locks
- Activity recognition
- Group analysis
- Crop health monitoring
- ...