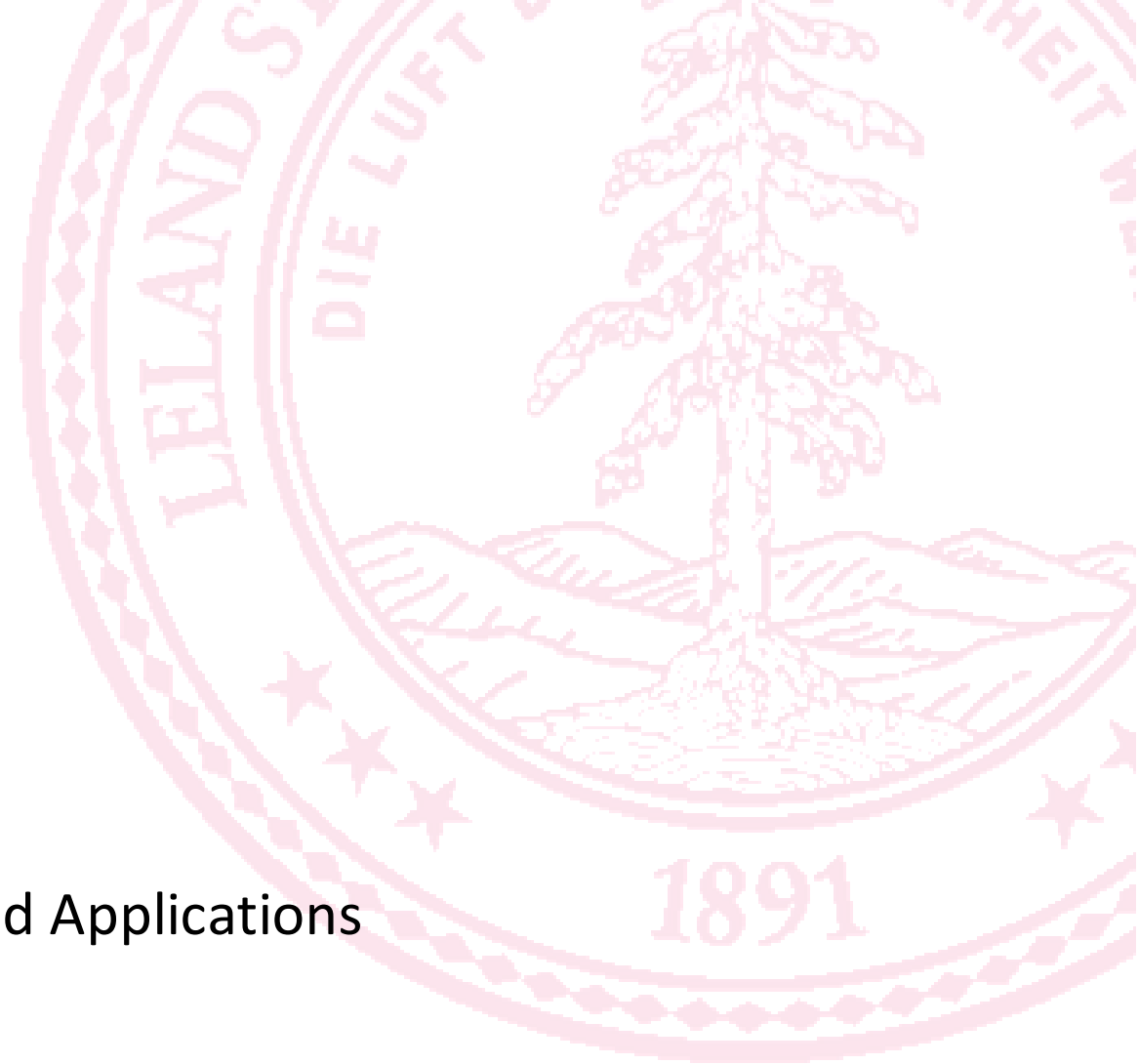

Lecture 16: Tracking

Simple KLT tracker

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CS131 Computer Vision: Foundations and Applications

What will we learn today?

- Simple KLT tracker
  - Pipeline
  - Results

Reading: [Szeliski] Chapters: 8.4, 8.5

[Fleet & Weiss, 2005]
http://www.cs.toronto.edu/pub/jepson/teaching/vision/2503/opticalFlow.pdf

Simple KLT tracker

1. Find a good point to track (Harris corner)
2. For each Harris corner *compute motion* (translation or affine) between consecutive frames.
3. Link motion vectors in successive frames to get a track for each Harris point
4. Introduce new Harris points by applying Harris detector at every m (10 or 15) frames.
5. Track new and old Harris points using steps 1-3.

KLT tracker for fish

Video credit: Kanade

Tracking cars

Video credit: Kanade

Tracking movement

Video credit: Kanade

Summary

- Simple KLT tracker
  - Pipeline
  - Results