CS-543: Computer Vision Instructor: D.A. Forsyth
Project list

Instructions

This is a list of possible projects. Each member of the class should be in a project group by 17 Feb 2009. Each project group should choose a project from this list, and prepare a short writeup (about two pages) dealing with what they will do to produce a working project and sketching roughly the tools and technology to be employed. This writeup is due 28 Feb 2009 (which means you might want to be in a group somewhat earlier than that). Each group may then either (a) change choice of project, and prepare a second such writeup, due 14 Mar, or (b) commit to that project and prepare a more detailed writeup, also due 14 Mar.

Possible projects

- **Removing a person or an object from a video:** Use the ideas of layered motion to remove a person or an object from a short video sequence.

- **Reconstructing a point cloud in a motion sequence:** Construct a 3D model of a familiar object (Siebel Hall might be a good choice), from a video sequence.

- **Photometric stereo:** Build a photometric stereo reconstruction of three familiar objects, and check the accuracy of the reconstruction.

- **Face finding:** Build and test a program that can find frontal views of faces in images.

- **Pedestrian finding:** Build and test a program that can find pedestrians in images.

- **Image segmentation:** Build and test an image segmenter.

- **Shape from texture:** Build and test a shape from texture method.

- **Texture synthesis:** Build and test a texture synthesis method.

- **Material classification:** Build and test a method to classify images of materials (plastic, fur, concrete, wood, and so on).

- **Your choice:** Describe a choice of project here.