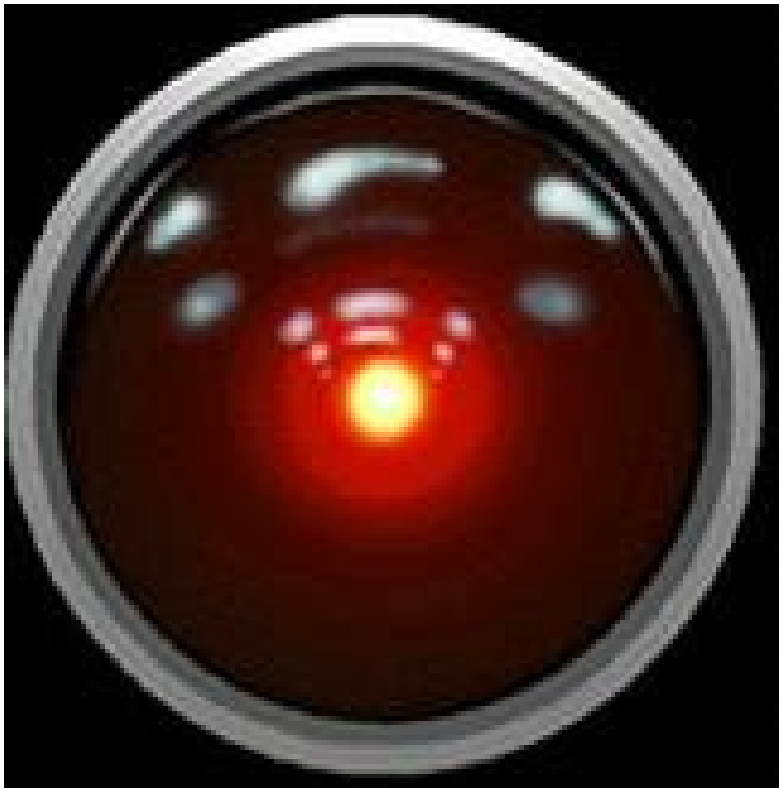


CS 309: Autonomous Intelligent Robotics

Instructor: Jivko Sinapov

http://www.cs.utexas.edu/~jsinapov/teaching/cs309_spring2017/

Final Project Timeline

- Project Proposal due: Apr. 3rd
- Project Presentations / Demos: Finals Period assigned for this class
- Final Report due: May 11th

Project Proposal Guidelines

- Work in groups of 2-3
- Preferably, team up with people with different skills than yours
- Purpose of the proposal is to give you an outline / roadmap

Project Proposal Guidelines

- Each proposal should be about 3-4 pages

- Each proposal should include:
  - What is the application / task / problem?
  - Any previous experience you may have in that area
  - What do you expect to achieve by the end of the semester?
  - How do you plan to evaluate whether it works or not?
  - Related work in robotics
  - A timeline / schedule of progress and milestones

Project Proposal Guidelines

- Organization: your proposal should have sections and headings (don't just submit one long essay)
- For example:
  - Introduction / problem formulation
  - Related Work in Robotics
  - Proposed approach / software
  - Proposed evaluation
  - Summary of anticipated end result

Project Ideas

Help the robot “see” something it currently cannot

Help the robot “hear” something (e.g., the elevator sound)

Help the robot “do” something (e.g., follow a person)

Final Project Timeline

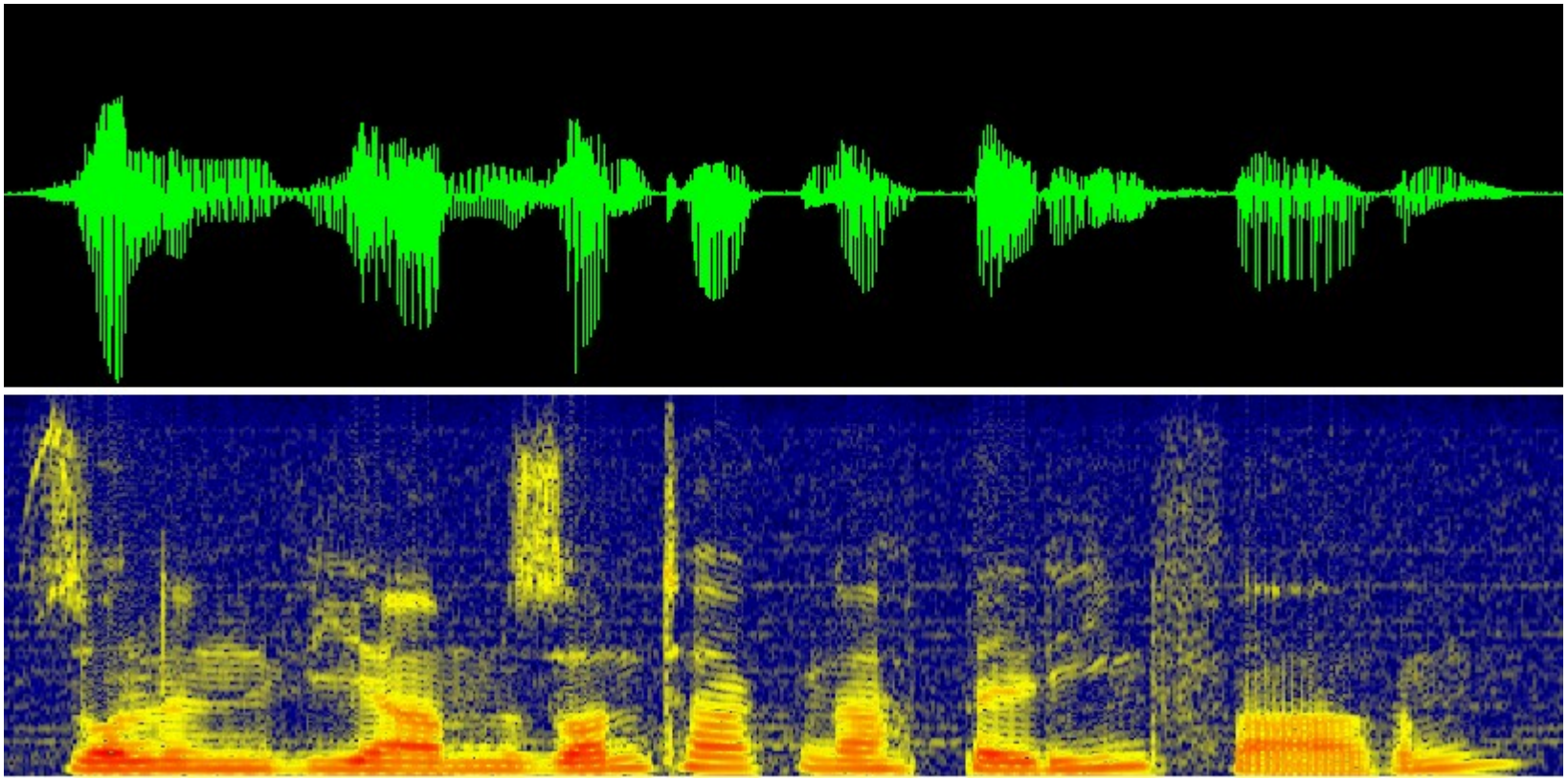
The most important thing is to start early, and discuss your ideas with the TAs, mentors and myself. We'll point you to a starting point, describe functionality that already exists, and help refine your ideas.

What will be covered the rest of the semester...

Point Cloud Library (3D Vision)

http://pointclouds.org/

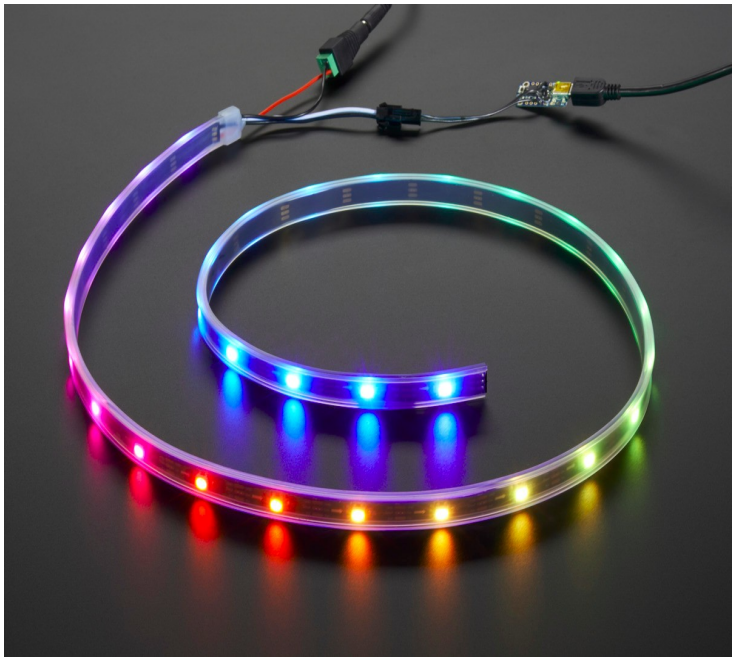
Auditory Perception and Speech Recognition



[https://www-i6.informatik.rwth-aachen.de/web/Research/Figures/SR_wavespec_02Nov01.jpeg]

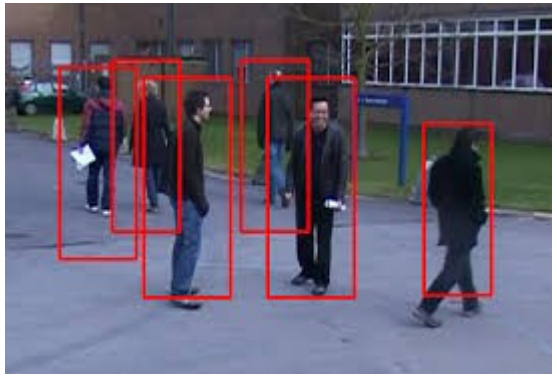
Project Ideas

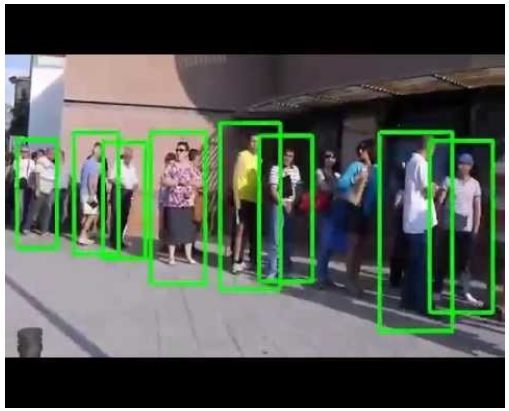
LED Strip – implement and evaluate a behavior using the LED lights on the robot



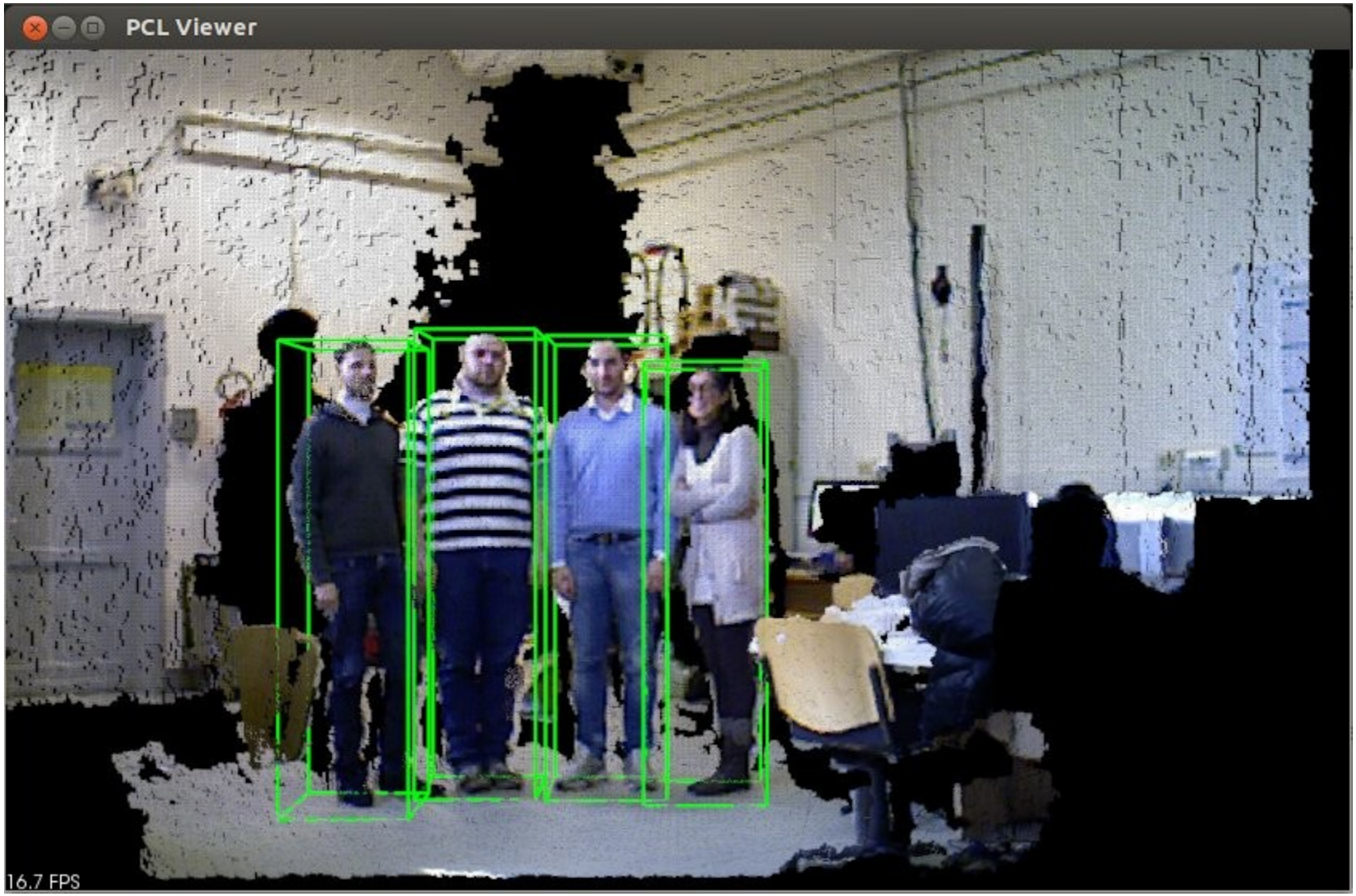
Project Ideas

Project Ideas

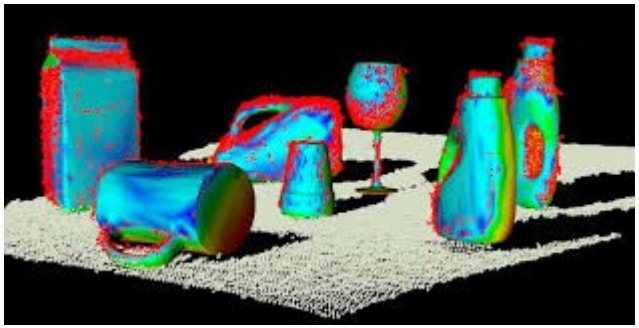


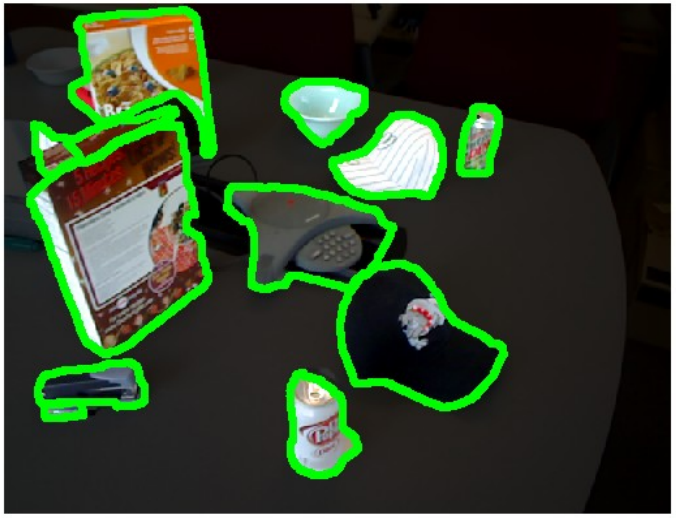


Project Ideas



Project Ideas





Today

- Sending navigation goals to the robot
- Breakout Session: discuss project with your group / find a group
- Motion History computer vision example