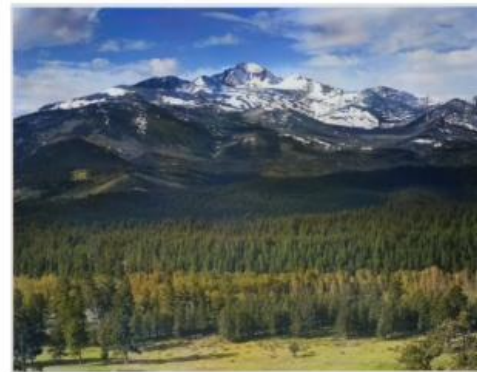


# Image Colorization



Colorado National Park, 1941



Textile Mill, June 1937



Berry Field, June 1909



Hamilton, 1936

# Chinese Painting Style Transfer



(a) Style



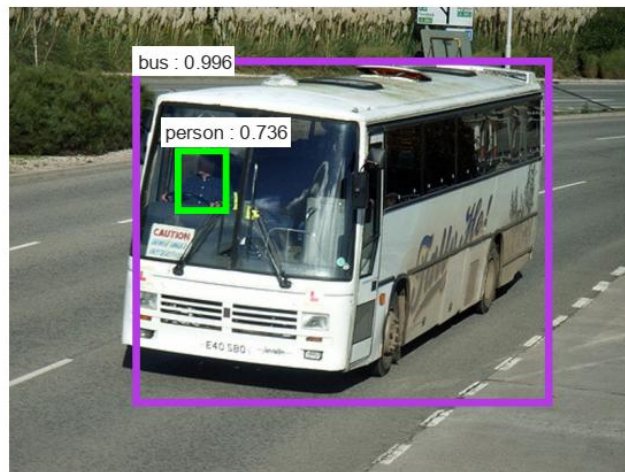
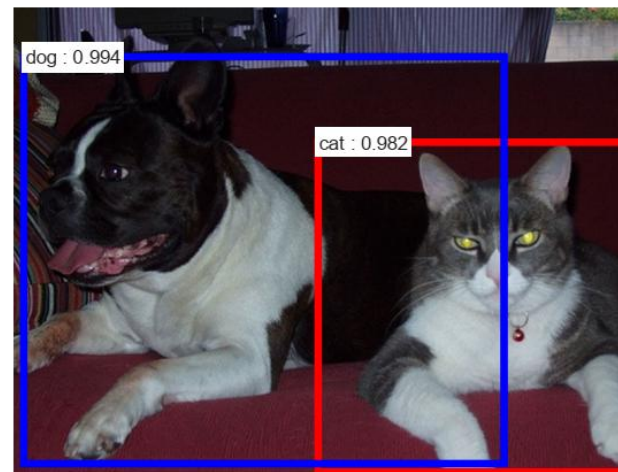
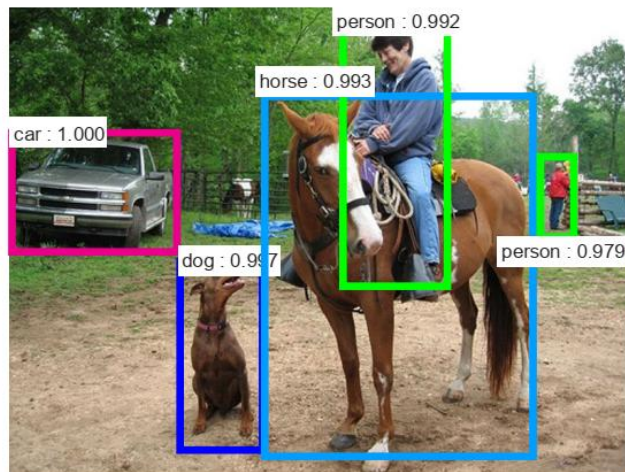
(b) Content



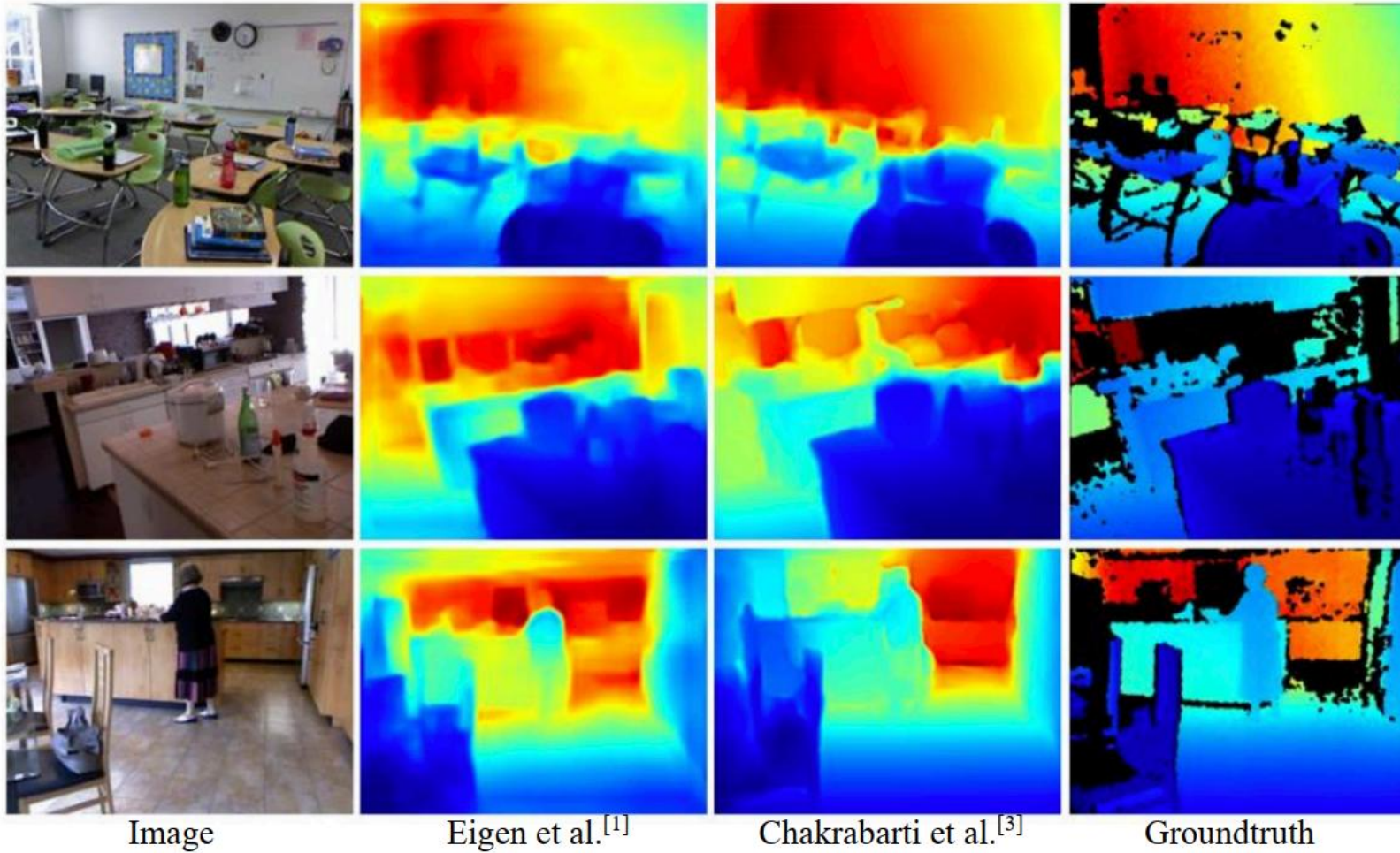
(c) Generated Result by (a) + (b)



# Object Detection



# Monocular Depth Estimation





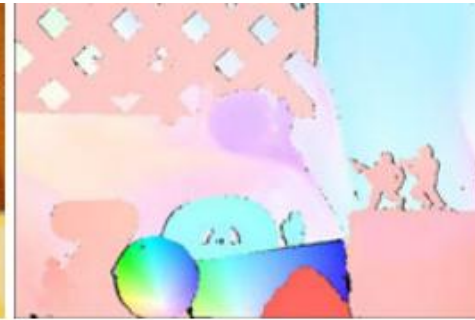
# Optical Flow Estimation



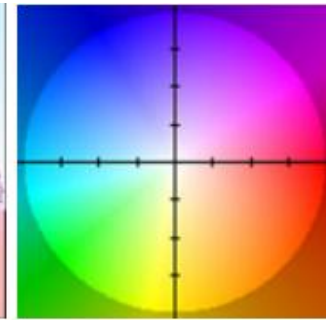
**Army** frame 0



**Army** frame 1



**Army** GT flow



flow color coding



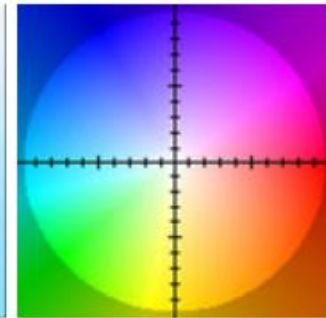
**Mequon** frame 0



**Mequon** frame 1



**Mequon** GT flow



flow color coding

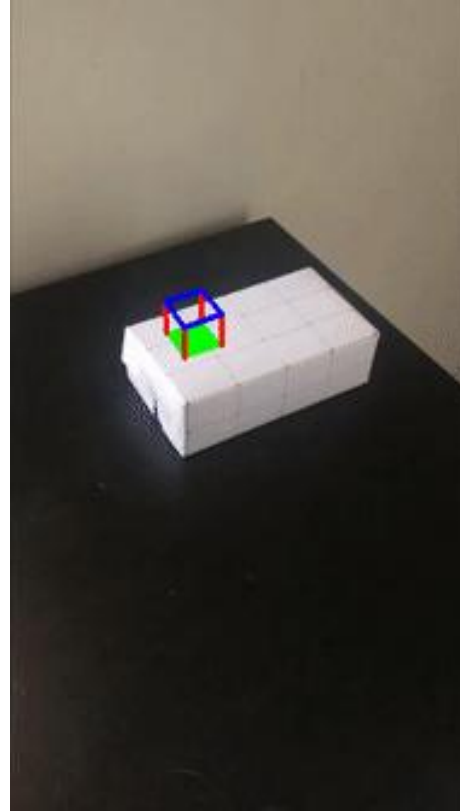
# Vision-based SLAM



# Easy Augmented Reality



input



result



tracked points

Credit: Alex Efros

# Report Template



- Please refer to the enclosed template file or the overleaf project at:
  - <https://www.overleaf.com/read/rdtytdngpdhk>



# Grading

- Three mini programming projects:
  - Homework1 (10%)
  - Homework2 (15%)
  - Homework3 (15%)
- Final: Team work,  $\leq 3$ , **Weight:** 1.0、0.9、0.8
  - Final Project (50%)
    - Deadline: At the very beginning of Spring Semester 2024 [Tentative: **March 8, 2024**]
  - Final Project Presentation (10%)
    - TBD