

SATO LAB.

[Computer Vision]

Center for Information Fusion

<http://www.hci.iis.u-tokyo.ac.jp>

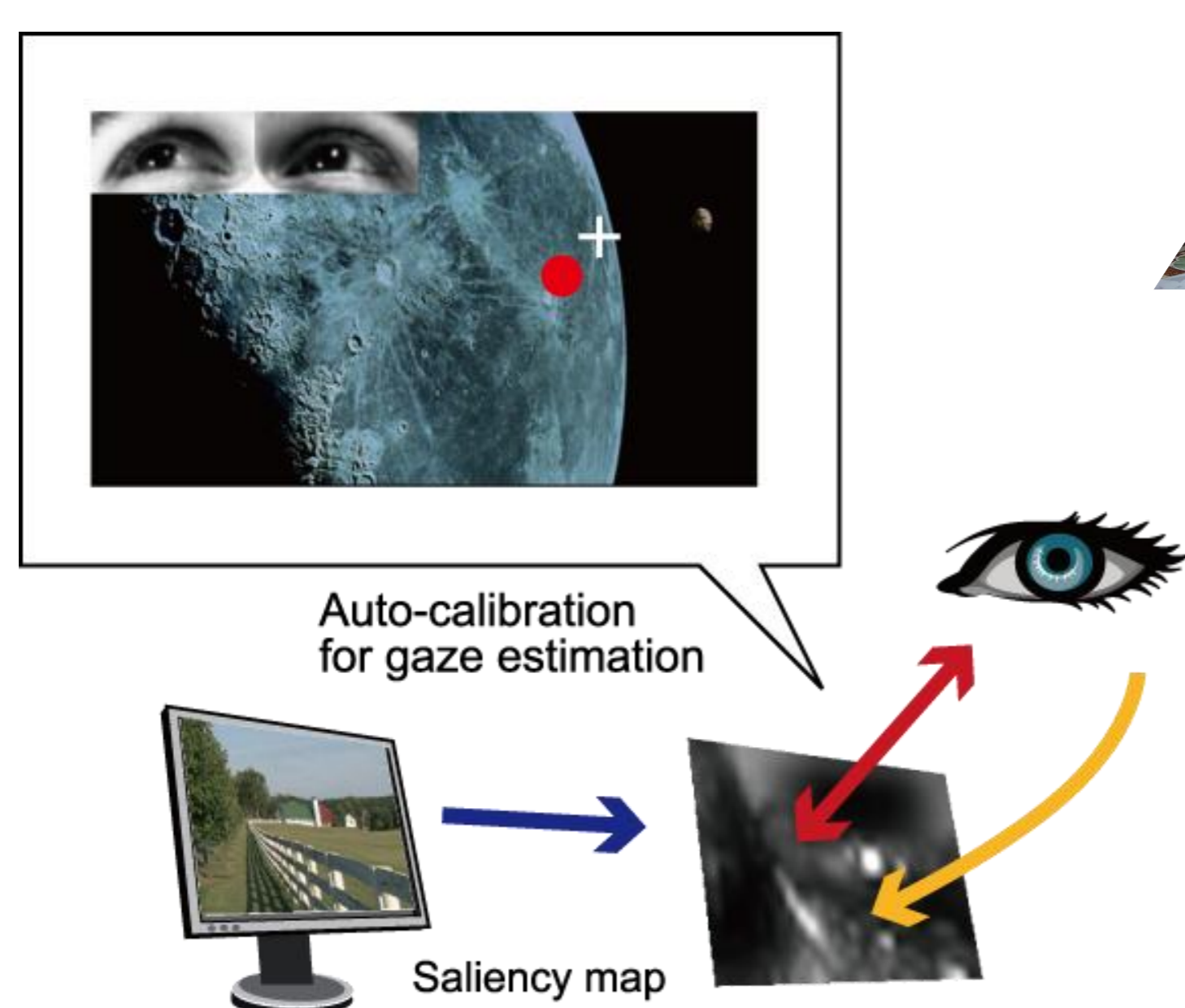
Visual Media Engineering

Department of Information and Communication Engineering, Graduate School of Information Science and Technology
Emerging Design and Informatics Course, Graduate School of Interdisciplinary Information Studies

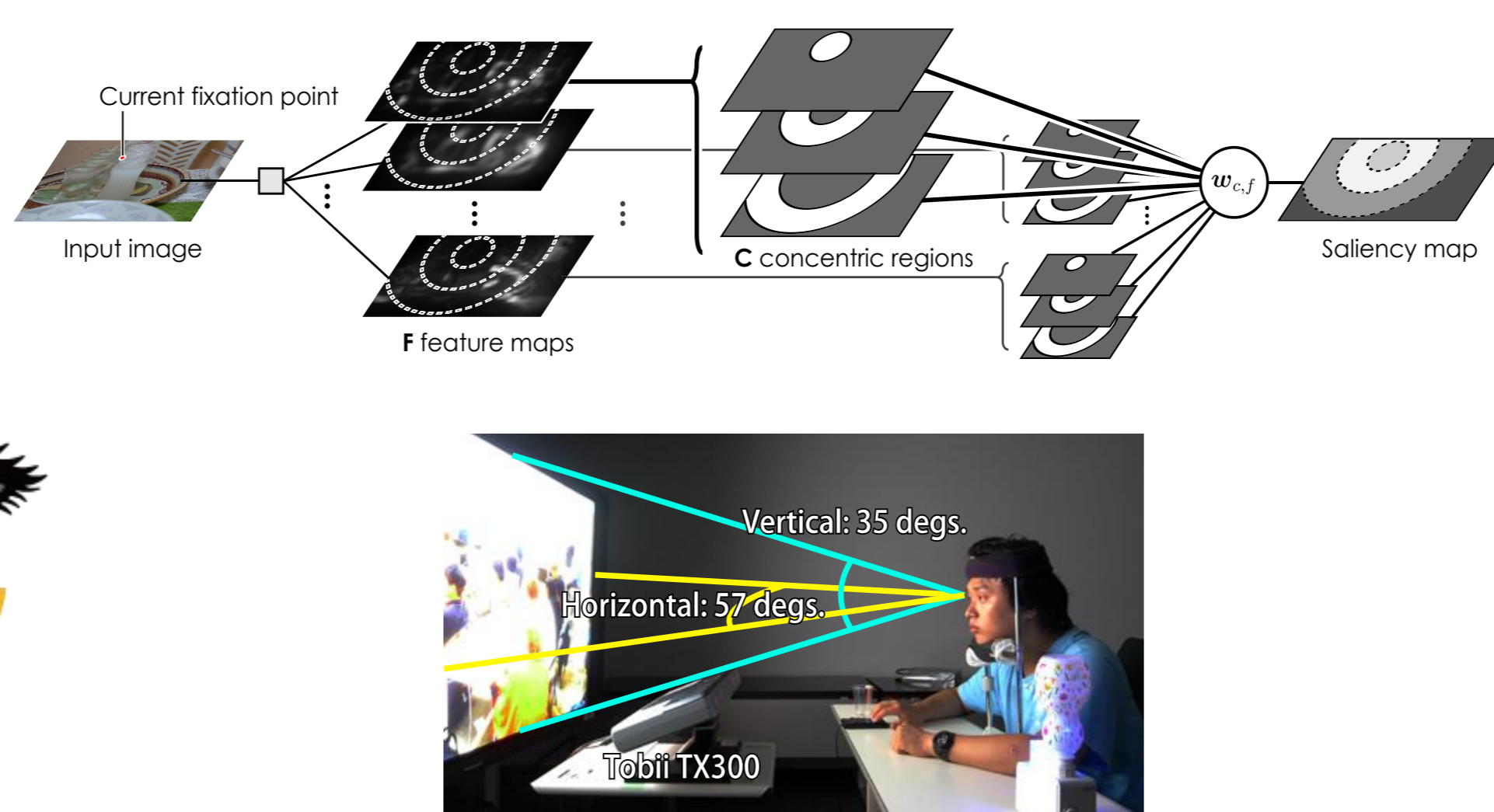
Computer Vision for Human Behavior Sensing and Material Perception Analysis

Toward development of information systems which can casually offer assistance to those who need it, real-time sensing of human behaviors including visual focus of attention is important. In our group, we develop computer vision techniques for sensing and understanding our visual focus of attention and activities in real world, and propose their applications to human-computer interaction. In addition, we have been studying sensing and modeling of real object appearance for material perception analysis.

- ◆ Sensing and understanding human activities
- ◆ Gaze sensing for modeling visual focus of attention
- ◆ Modeling of object appearance
- ◆ Illumination invariant face recognition and human re-identification



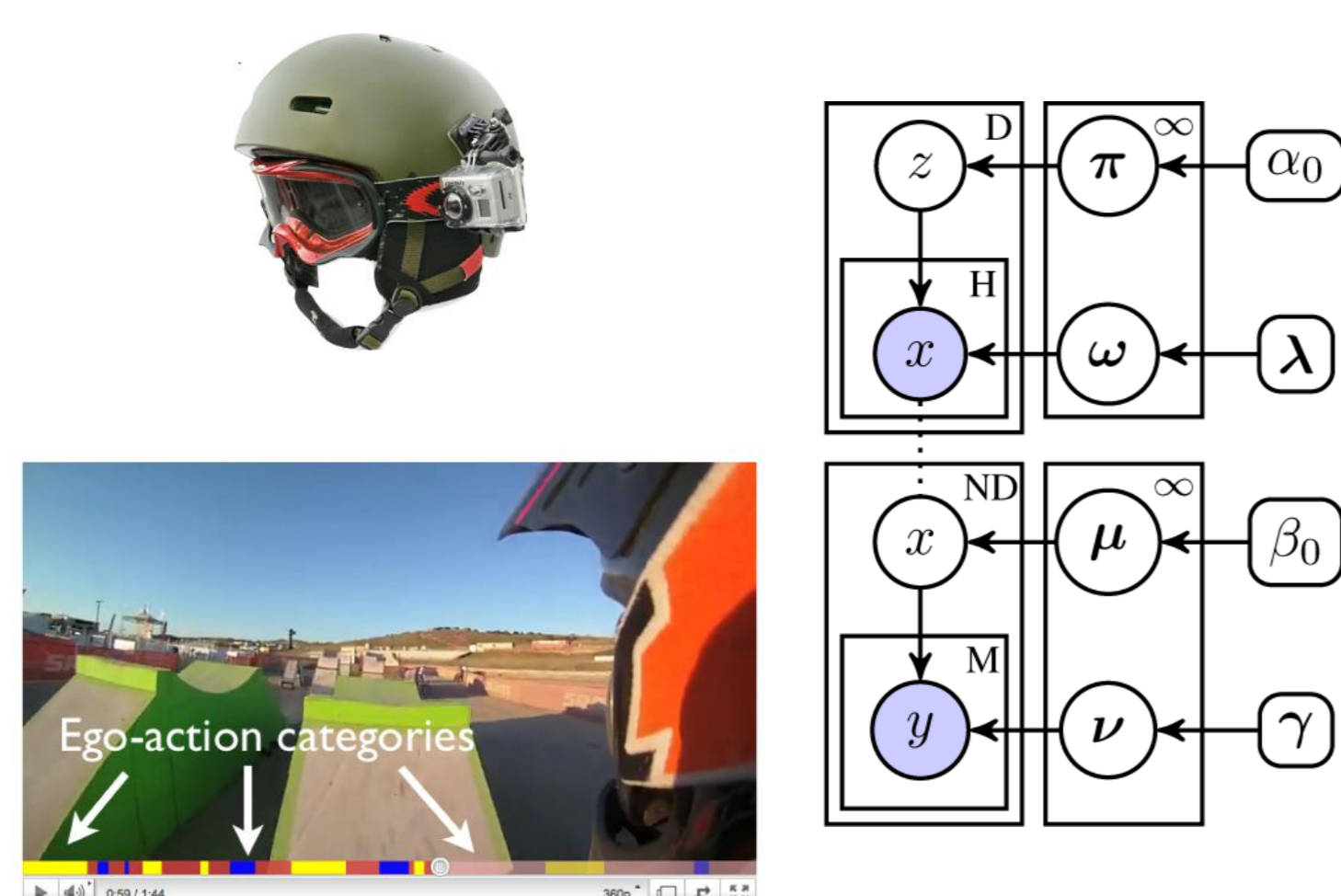
Gaze estimation using visual saliency



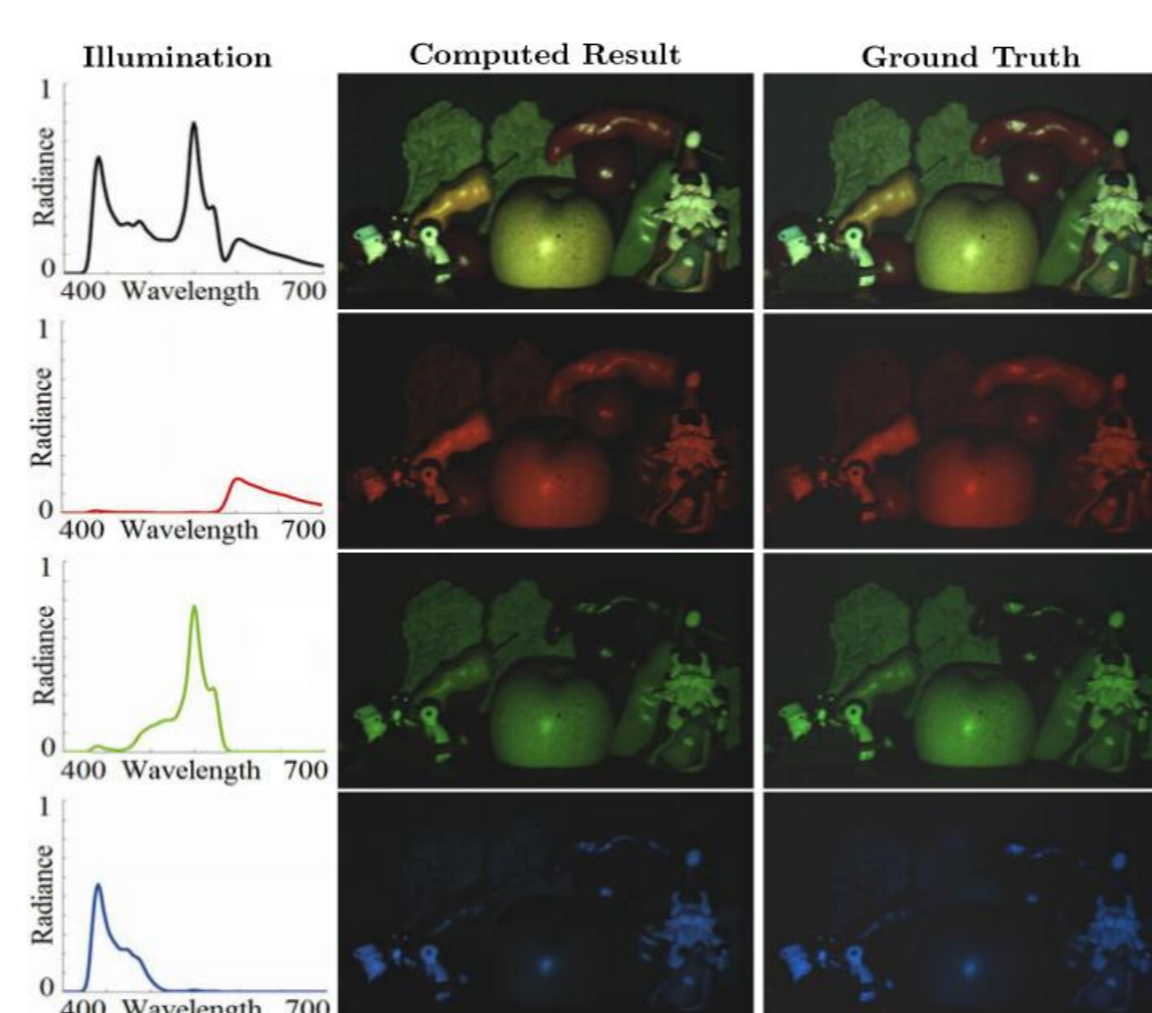
Visual saliency model incorporating visual field characteristics



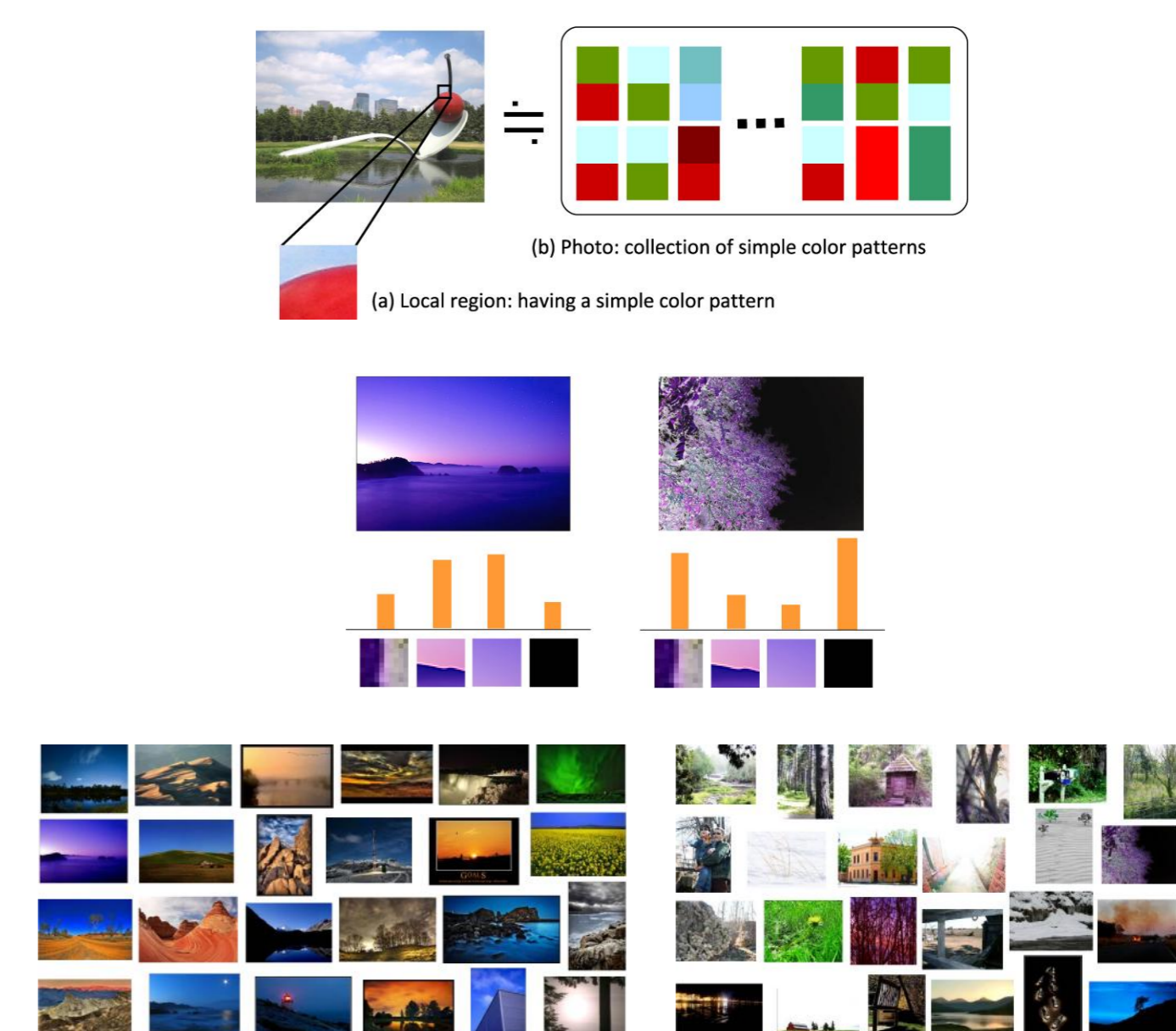
Multi-touch interaction with free head motion



Action analysis from first-person videos



Fast spectral reflectance recovery



Aesthetic quality classification of photos