I. Generic object categorization
   a. Basic pipeline

   b. Window-based models
      i. Face detection with boosting and rectangular features (Viola & Jones 2001)
         1. Boosting algorithm
         2. Integral images and rectangular features
         3. Viola-Jones detector
      ii. Scene recognition with nearest neighbors and Gist (Hays & Efros, 2008)
          1. Gist descriptor
          2. Nearest neighbors with large database
      iii. Person detection with SVM and HOG (Dalal & Triggs, 2005)
          1. Support vector machines
          2. HOG descriptor
      iv. Pros and cons of window-based models

   c. Part-based models
      i. Bag-of-words
         1. e.g., with Naïve Bayes classifier
         2. Local feature sampling strategies for categorization
         3. Pyramid match kernel
      ii. Generalized Hough for category detection
          1. Implicit shape model (Leibe et al. 2004)
          2. (Class-specific Hough forests – Lempitsky et al.)
      iii. (Deformable part-based model with latent SVM (Felzenszwalb et al. 2008))

Assignment 2 out, due Oct 5.