

1. Assume skin color is going to be used as a feature for human face detection. To include skin colors from different ethnicities expectation maximization is considered. Describe the technique and show the results using sample MATLAB or OpenCV implementation
2. A comparative study of the hand-written character recognition methods. Implement at least one of them using MATLAB or OpenCV
3. The quality of the dark color images can be improved by histogram equalization. Discuss how histogram equalization can be applied to color images. How can we eliminate noise effect in color images? Discuss and provide a sample running example (MATLAB or OpenCV)
4. Detecting license plates. Compare algorithms and implement one of the methods
5. Finger print identification. Compare algorithms and implement one of the methods
6. Assume a limited number of objects (5 at most) with pre-defined shapes are viewed using a camera mounted above a conveyer belt. Discuss methods to find the orientation of the objects. Compare algorithms and implement one of the methods
7. Assume depth information is provided together with an image (RGB). How can we use the depth information to detect object boundaries? Compare algorithms and implement one of the methods.
8. Discuss image registration methods. Compare algorithms and implement one of the methods