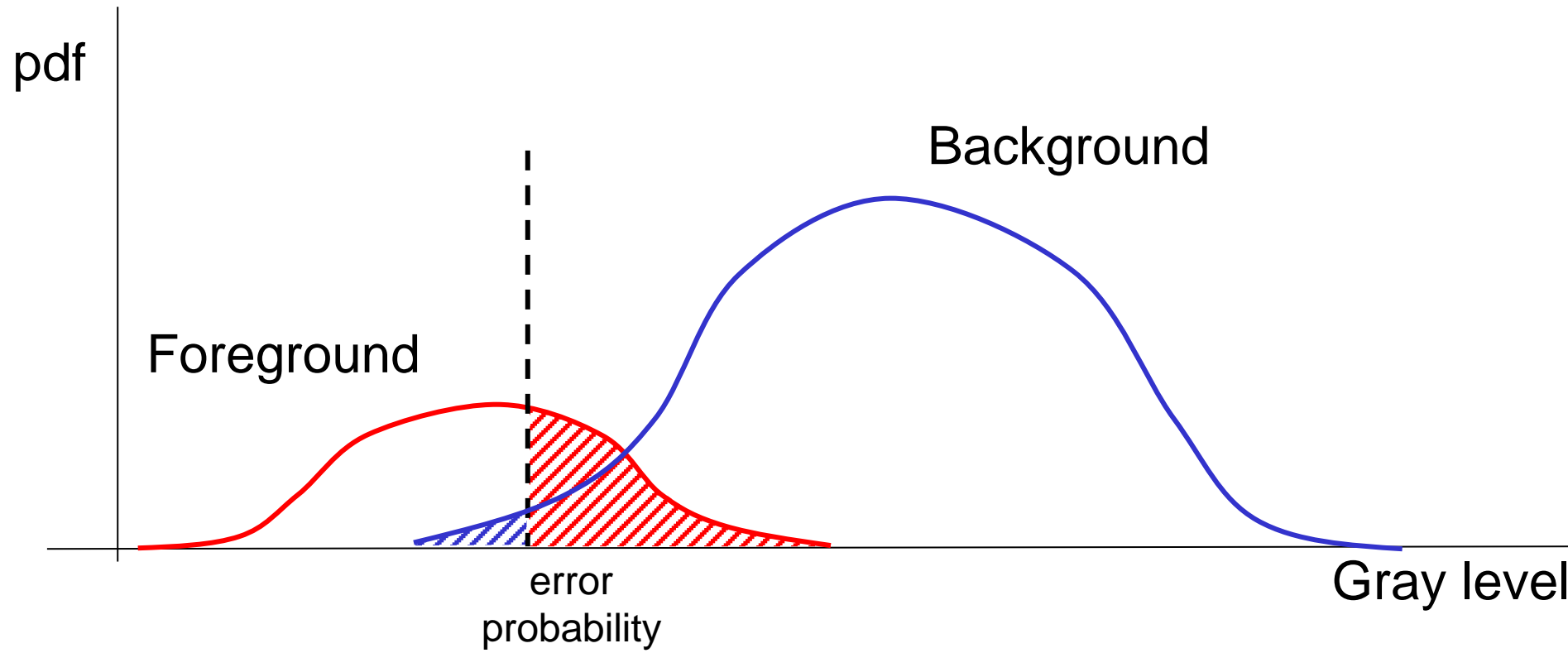
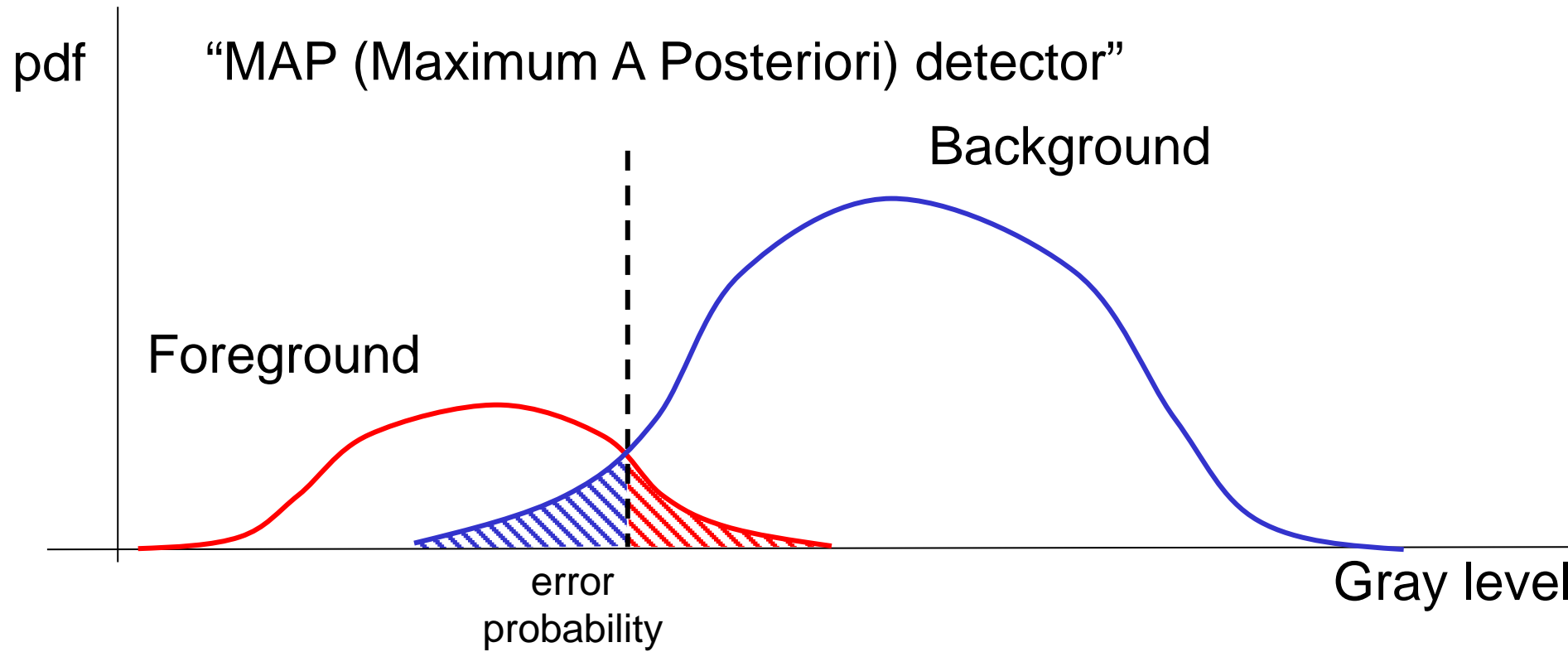


# Supervised thresholding



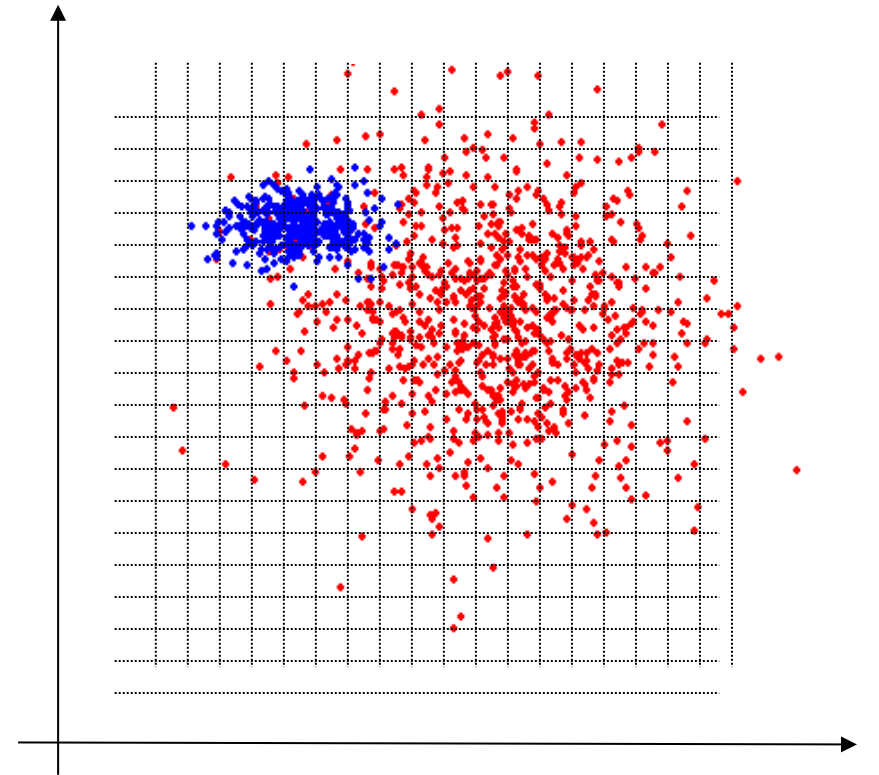
# Supervised thresholding



If errors  $BG \rightarrow FG$  and  $FG \rightarrow BG$  are associated with different costs:  
“Bayes minimum risk detector” is optimal.

# Multidimensional MAP detector

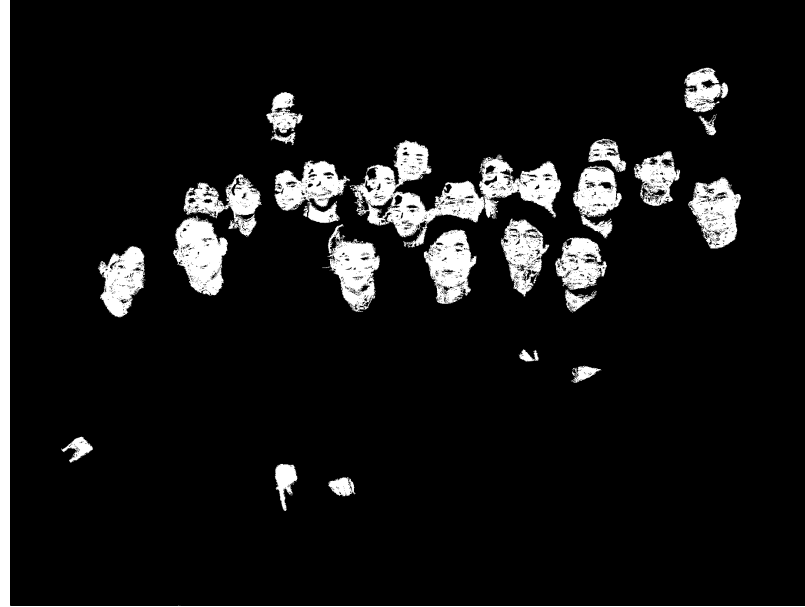
- Training
  - Provide labelled set of training data
  - Subdivide n-dimensional space into small bins
  - Count frequency of occurrence for each bin and class in training set, label bin with most probable class
  - (Propagate class labels to empty bins)
- For test data: identify bin, look up the most probable class



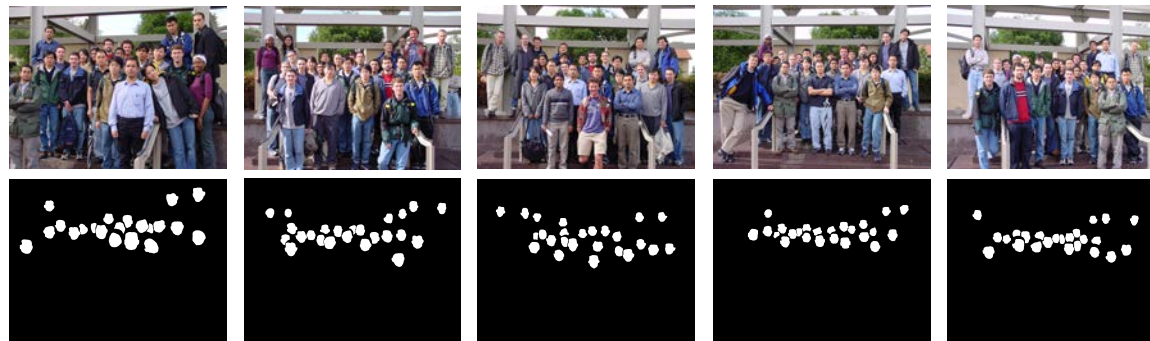
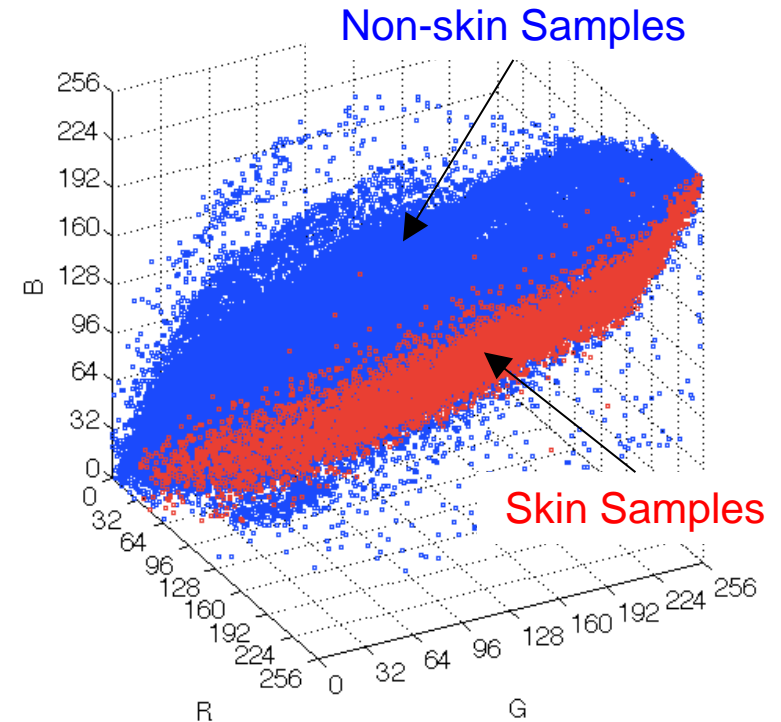
# MAP detector in RGB-space



Original image



Skin color detector



Five training images

