

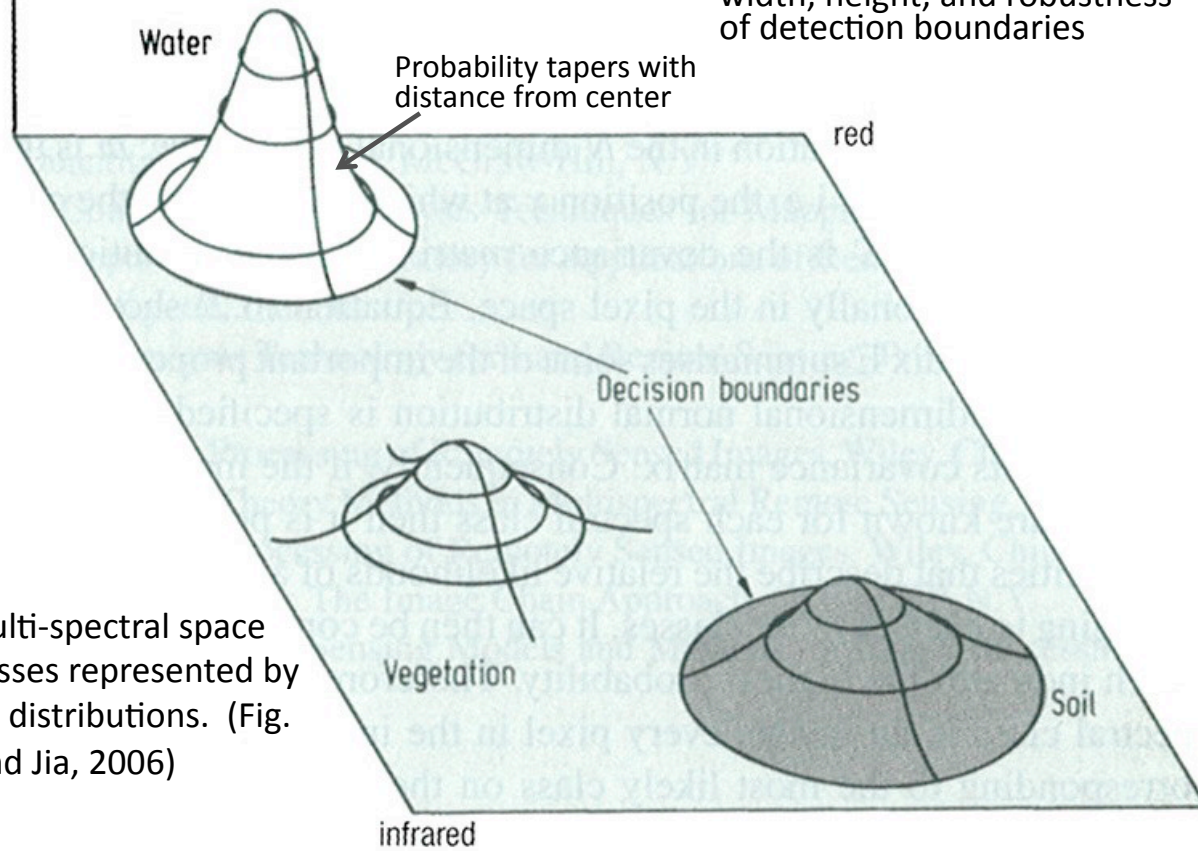
Agenda

- Image of the Day
- Midterm Questions
- Supervised Classification
 - Review from last lab
 - Adjusting Std. Deviations in ENVI

Two Dimensional Multi-Spectral Classes

Probability of pixels belong to each class

Each class modeled by a normal distribution specified by a mean vector and covariance matrix, which determine location, width, height, and robustness of detection boundaries

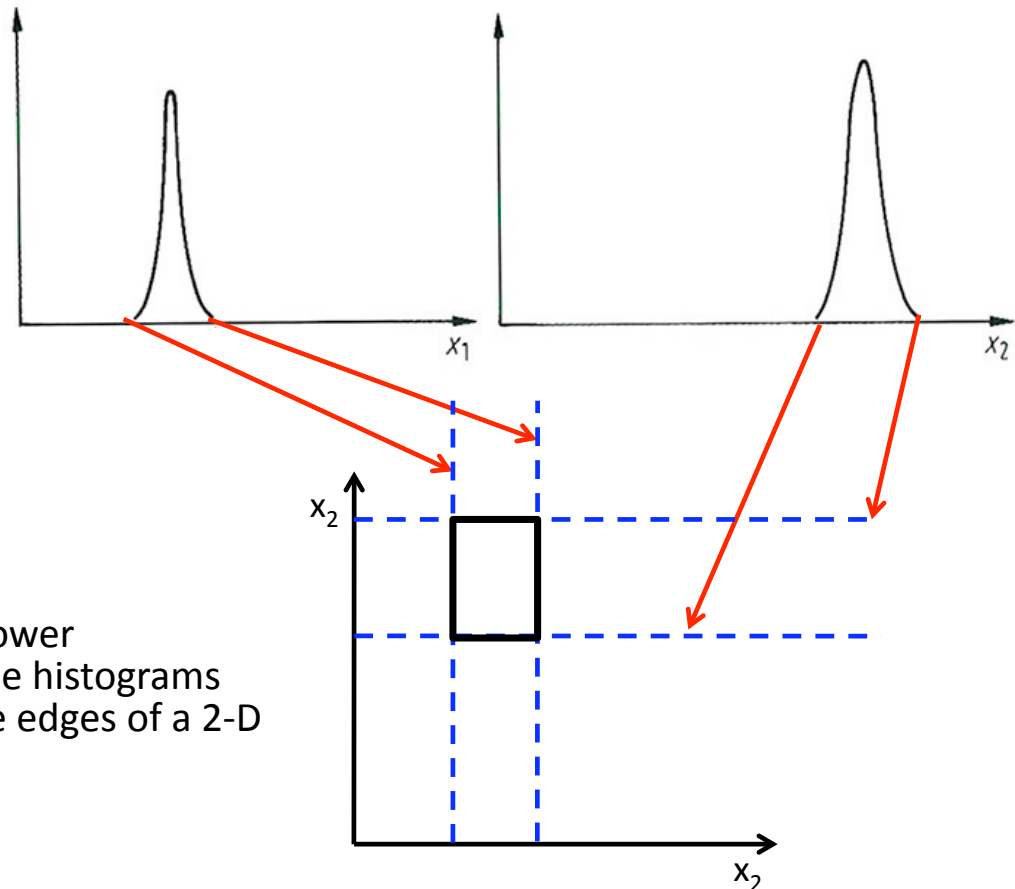


Two-dimensional multi-spectral space with the spectral classes represented by Gaussian probability distributions. (Fig. 3.8 from Richards and Jia, 2006)

Parallelepiped Classification

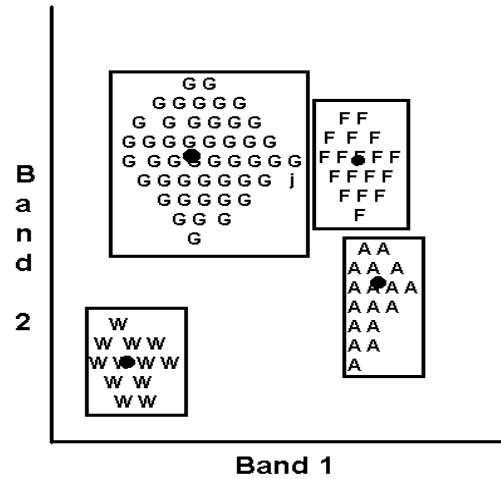
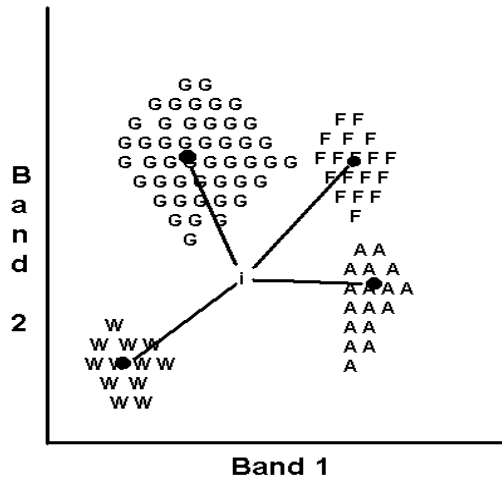
- Simple classification technique based on histograms of individual spectral components in training data

Histograms for the components of a 2-D set of training data corresponding to a single spectral class. (Fig. 8.5 from Richards and Jia, 2006)



The upper and lower boundaries of the histograms above define the edges of a 2-D parallelepiped.

Parallelepiped Classification



Distribution of class data in 2-D spectral space (left) and parallelepipeds associated with those distributions (right)

- Computationally efficient
- Many cases of dual classification
- Many cases of null classification

