Lab 6: Idrisi Advanced Classifiers

This lab provided an introduction to the capabilities of Idrisi software package in terms of advanced classification schemes. The various exercises performed include the following topics:

1. Bayes' Theorem and Maximum Likelihood Classification
2. Soft Classifiers I: Bayclass Soft Classifier
3. Hardeners
4. Soft Classifiers II: Dempster-Shafer Soft Classifier and BELCLASS
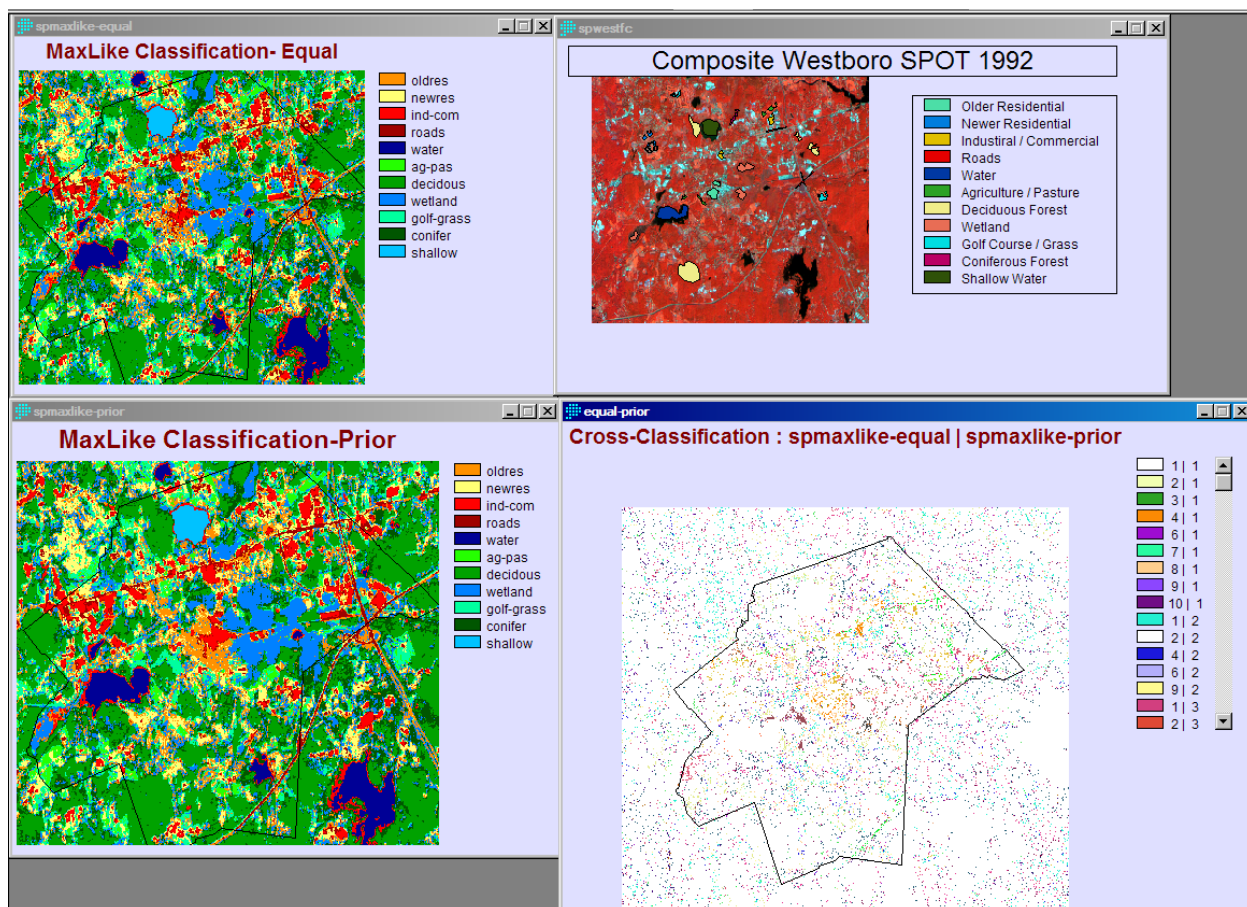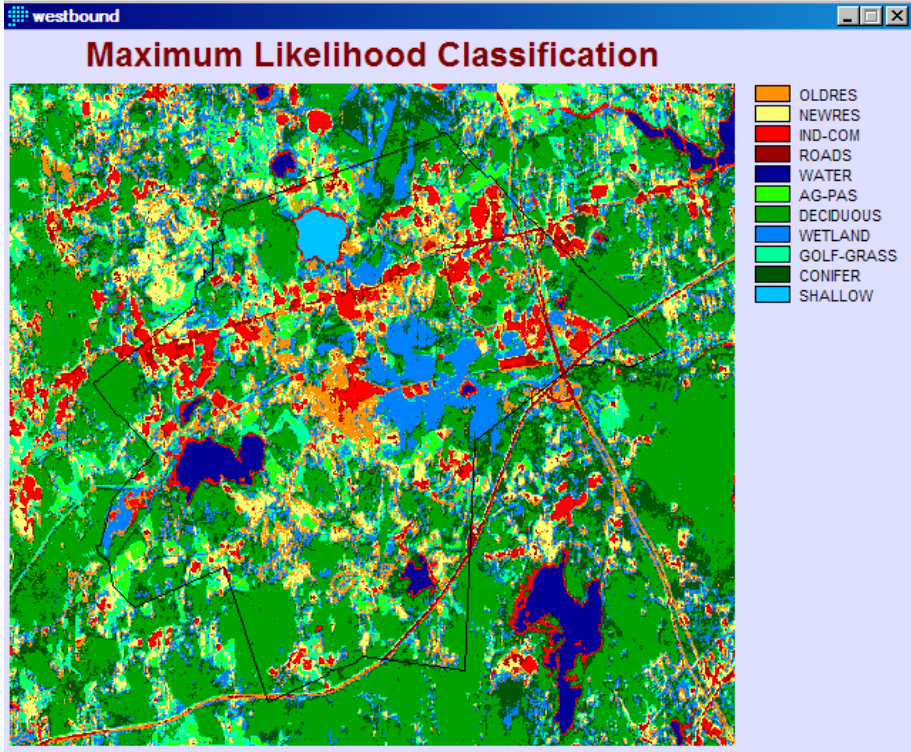5. Dempster-Shafer and Classification Uncertainty
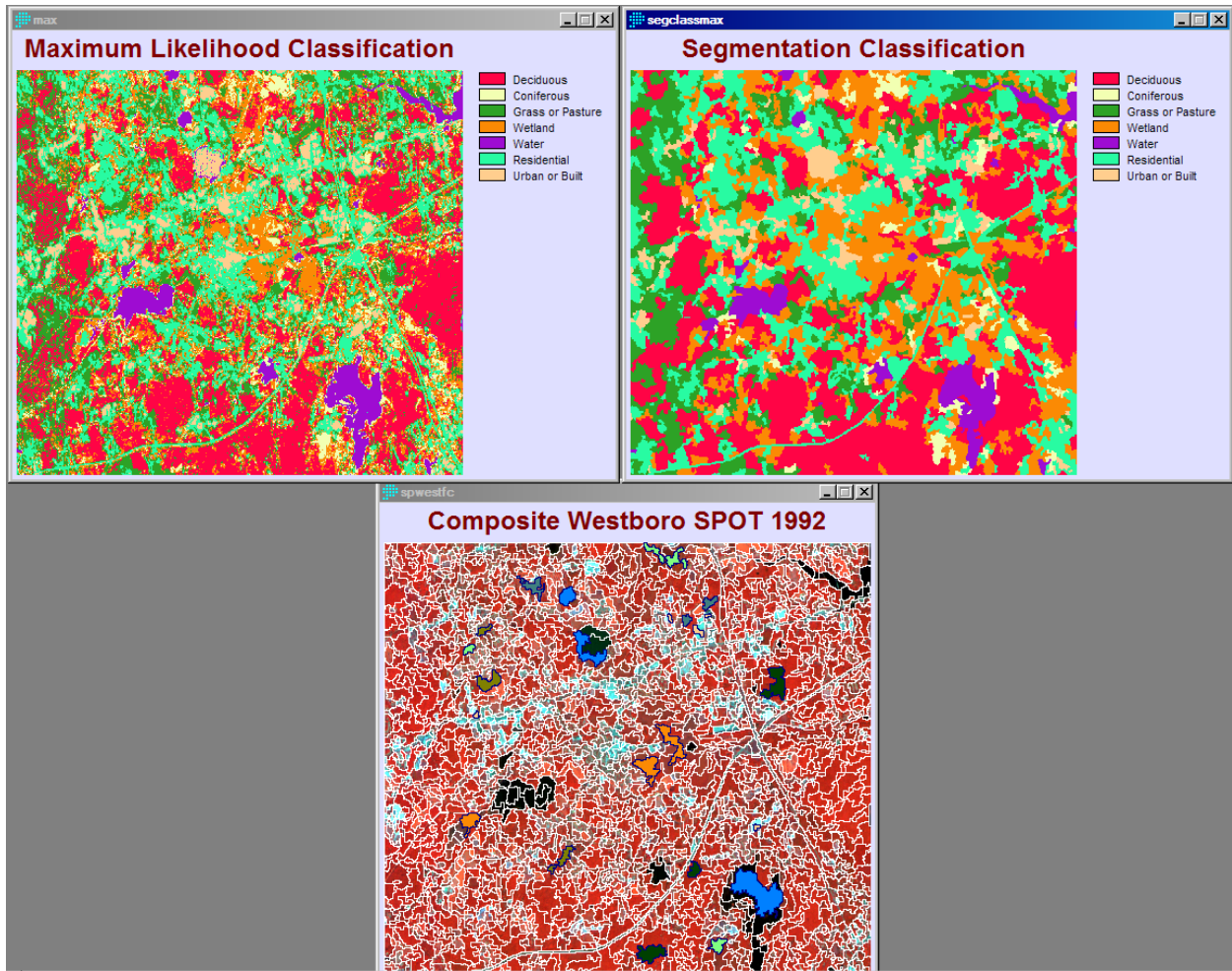
Figure 1: Exercise 5-1 MaxLike Classification

Maximum Likelihood Classification

OLDRES
NEWRES
IND-COM
ROADS
WATER
AG-PAS
DECIDUOUS
WETLAND
GOLF-GRASS
CONIFER
SHALLOW

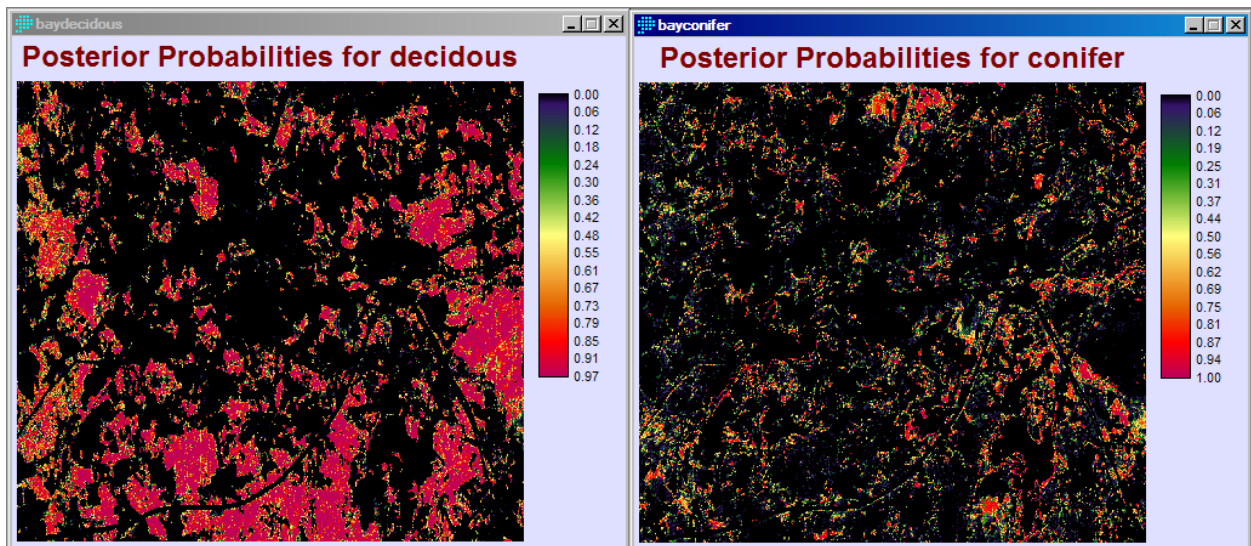Figure 2: Exercise 5-2 Segmentation Classification

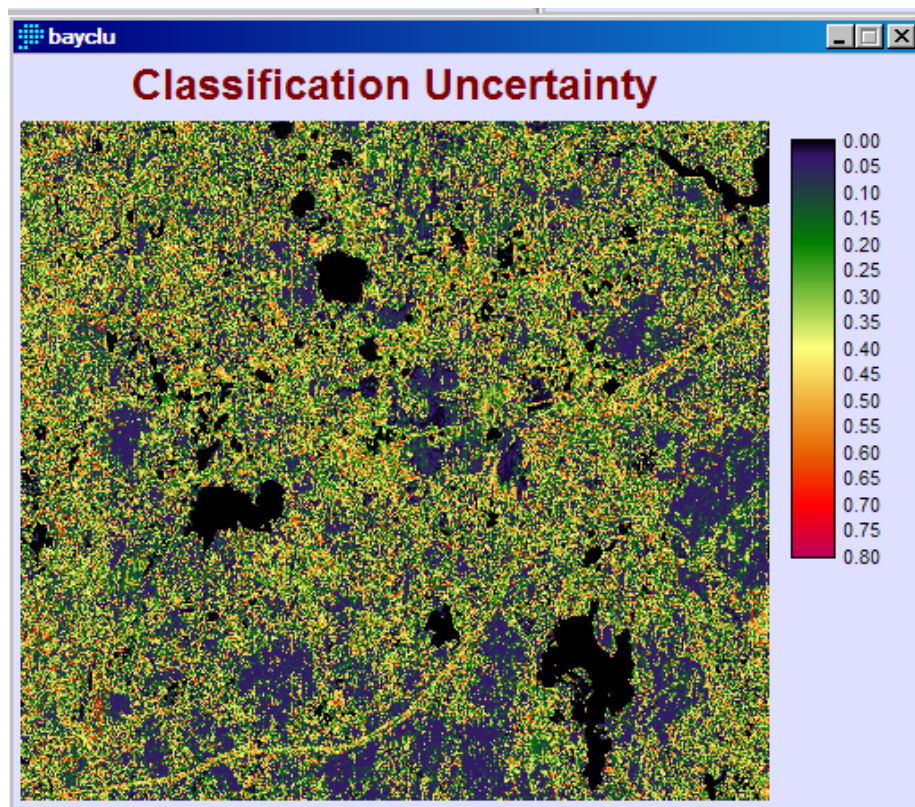**Figure 3:** Exercise 5-3 BAYCLASS Method Conifer vs Deciduous Classification

Figure 4: Ex 5-3 Bayclass Uncertainty

Average values extracted from BAYCLU based on SPMAXLIKE-EQUAL

Category	Average	Legend
1	0.343203	oldres
2	0.282645	newres
3	0.066097	ind-com
4	0.336280	roads
5	0.000002	water
6	0.294644	ag-pas
7	0.189668	decidous
8	0.149133	wetland
9	0.219302	golf-grass
10	0.301683	conifer
11	0.004251	shallow

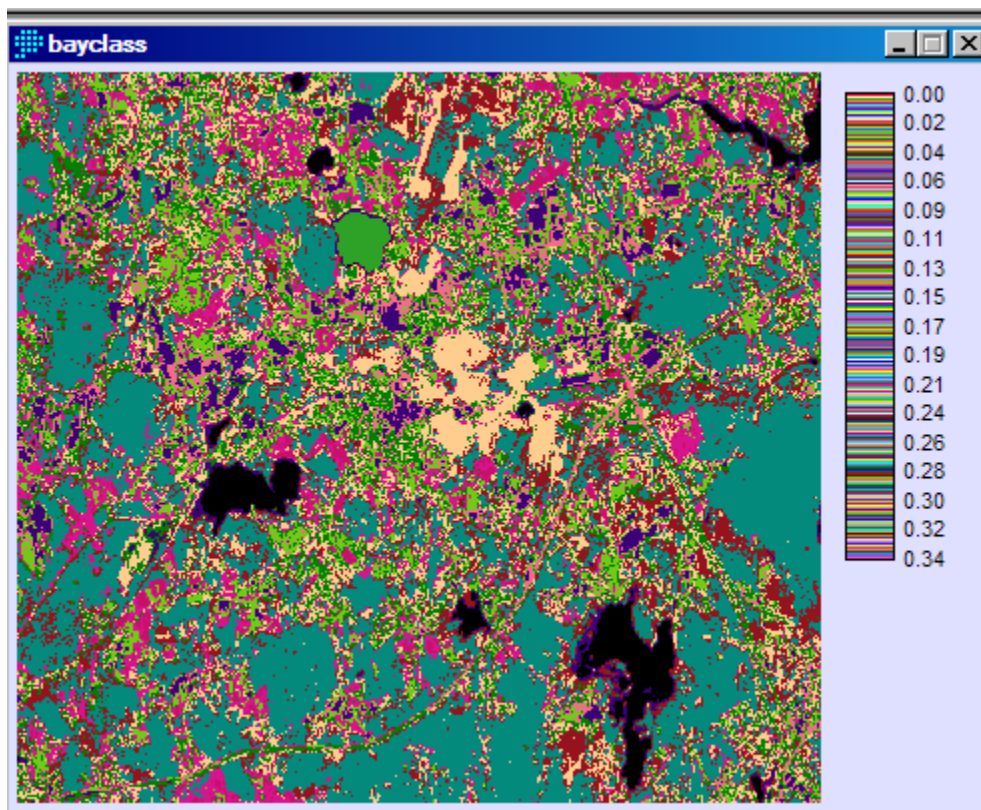Table 1: Exercise 5-3 Bayclass uncertainty by class

Figure 5: Exercise 5-3 Avg Bayclu Values based on spmaxlike-equal
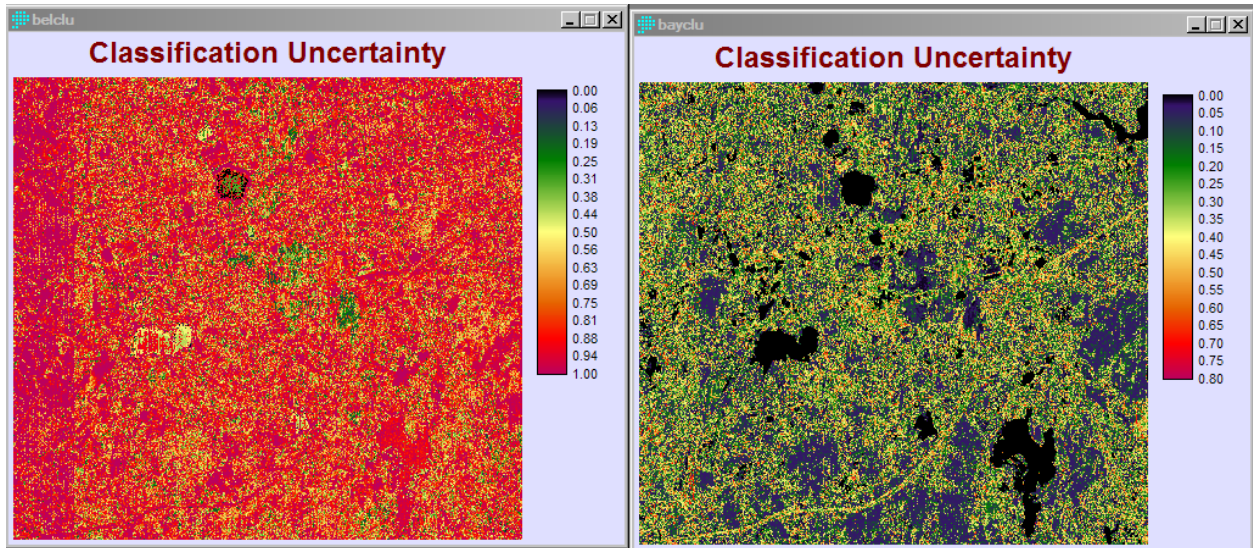
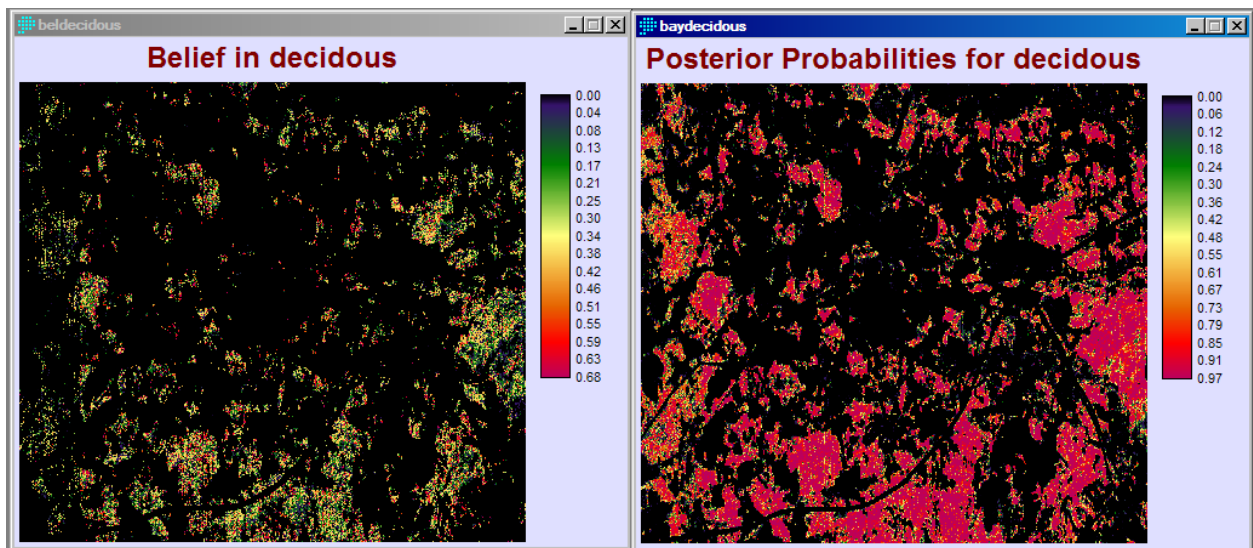**Figure 8:** Exercise 5-5 Comparison of bayclass and belclass uncertainty

Figure 9: Comparison of deciduous results (bel vs bayclass)