

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN  
Department of Electrical and Computer Engineering

ECE 598NA PATTERN RECOGNITION

**Problem Set 3**  
Fall 2006

**Issued:** Thursday, September 28, 2006

**Due:** Thursday, , 2006

---

Reading for problem set 3: DHS (Duda, Hart, & Stork) chapter 3

---

**Written Problems**

DHS problems 4.4, 4.9(a), 4.27, 5.10, 5.18.

**Library Problem**

Choose a third article, and review it briefly, using the same general criteria as in the earlier two problem sets.

**Computer Problems**

Do DHS computer problems 4.2 and 5.1, using either your own data or data from the text. Problem 4.2 specifies two different kernel widths (0.1 and 1.0); in order for these two kernel widths to be reasonable, please normalize your data prior to classification so that the class-independent global mean and variance are  $\mu = 0$  and  $\sigma^2 = 1$  in each dimension.