

CS 6640 Week 14

P4 due

A6 Grades

Issues: shape params: some incorrect

RFE: did not follow class notes nor .m file

0-p version is not good

need full boundary

need to normalize  $f$

need to take abs (fft)

need to sort + keep max mag  $n$

Mu: did not center to mean 0

PCA: did not produce ctrs in reduced frame

---

What's left:

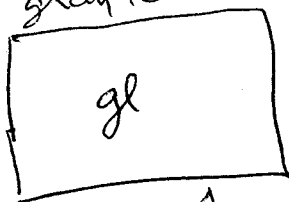
A7	1	Dec
Q13	3	Dec
P5	8	Dec

---

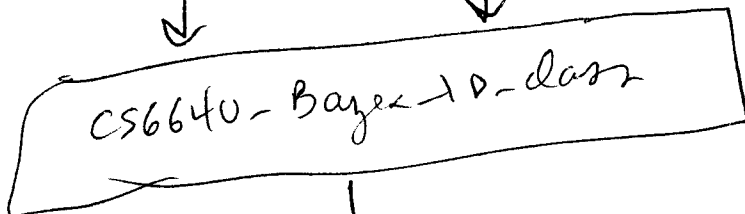
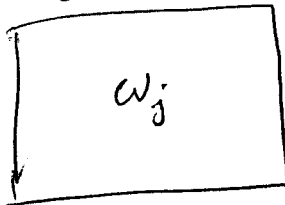
Questions?

## 1D Bayes

gray level image



classes



For each gray level,  $gl$   
find max prob class :  $\max_j P(w_j | gl)$

$$P(w_j | gl) = \frac{P(gl | w_j) P(w_j)}{P(gl)}$$

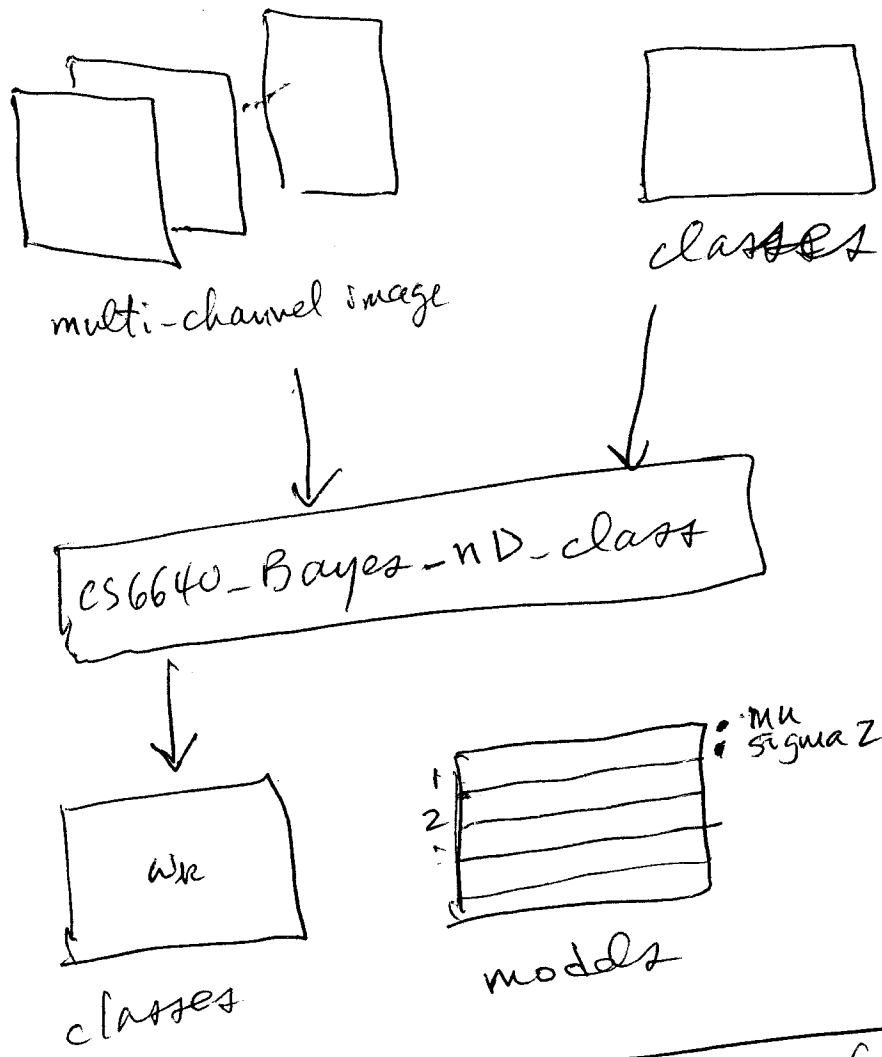
$$P(gl | w_j) = \frac{\# \text{ pixels in class } w_j \text{ with } gl}{\# \text{ pixels in class } w_j}$$

$$P(w_j) = \frac{\# \text{ pixels in class } w_j}{\# \text{ pixels in all classes}}$$

$$P(gl) = \frac{\# \text{ pixels with } gl}{\# \text{ pixels}}$$

# N-D Bayes

some corrections in A7.pdf




---

create means and covariance matrix from sample vectors in each class

assign max prob. class (use multi-dimensional function for  $p(\vec{v} | w_j)$ )

A7-criteria