CS599-Advanced Topics in Neural Computation and Statistical Learning

Questions for Jordan&Bishop Chapter 5 (or Chapter 6)

1. What is the difference between a *discriminative* model and a *generative* model?
2. Why don't we used regression methods for classifiction?
3. How is the logistic function motivated in binary classification?
4. Derive the max. likelihood solution to binary classification.
5. What is the softmax function and when is it needed?
6. What is a naïve Bayes classifier?
7. What is the exponential familiy?
8. What motivates discriminative classification models?
9. What is logistic regression?
10. What is the axiomatic procedure to derive logistic regression for a Bernoulli classification problem?
11. How does logistic regression differ from a naïve linear regression for classification?
12. What is iteratively reweighted least-squares?
13. What is and what motivates probit regression?