TAM 598 Lecture 25:

Neural Networks, cont'd

Announcements:

- HW 7 covers lectures 24-26; due on Fri May 16th

Classification using Neural Networks

features $\underline{x}_{1:n}$, discrete targets $y_{1:n}$, N.N. $f(\underline{x}; \theta)$

I) Binary Classification $y=0$ or $y=1$

train network by maximizing log likelihood, ie minimizing the cross entropy loss

II) Multiclass Classification $y = 0, 1, \ldots, K-1$ K values

III) Regularization

since NN's are highly flexible $\Rightarrow$ prone to overfitting

IV) Bayesian interpretation of regularization -