

CS599-Advanced Topics in Neural Computation and Statistical Learning

Questions for Jordan&Bishop Chapter 4

1. What is the difference between batch and on-line learning, and when should one use which method?
2. Give a graphical visualization of the LMS learning rule for a linear system.
3. What is the generic probabilistic model of linear regression?
4. What is the geometrical/dynamic systems intuition for the maximal learning rate in an LMS update?
5. How do multiple data points graphically constrain the solution of an LMS problem?
6. Derive linear regression in vector-matrix notation.
7. What is the difference between steepest descent and the LMS algorithm?
8. What is the basic concept of a convergence proof of LMS?
9. What is a probabilistic interpretation of LMS?