

Linear methods for large data

Using random matrix theory, we now have some very easy to understand and fast to use methods of computing low rank representations of matrices. I have been using these methods as a hammer to improve several statistical methods. I'll discuss three of these in this talk. First, I'll show how these ideas can be used to speed up stepwise regression. Then I'll turn to using them to construct new linear features motivated by CCA's. Finally, I'll use these methods to get a fast way of estimating an HMM.