

Problem Set # 7

Econ 722

1. Write code to implement ridge regression via the QR decomposition and test it against Hastie & Tibshirani.
2. Write code to implement LASSO via the “shooting algorithm” and test it against Hastie & Tibshirani’s version.
3. Write code to implement partial least squares and test it against an existing package.
4. Write code to implement principle components regression and test it against an existing package.
5. Some simulations testing out each of the above.
6. Use the EM algorithm to derive an algorithm for fitting a mixture of normals.
7. Write code to implement EM algorithm for a one-factor model.
8. Simulations with PCA versus PPCA versus Factor Analysis for different DGPs.