# MAD 6406: HOMEWORK 6

**Due: Friday, October 16**

Numbered problems are from Trefethen and Bau, Numerical Linear Algebra. Starred problems (*) require the use of Matlab (you can use another language if you prefer, but it's really easier if you use Matlab or Octave here).

(1)* 9.1

(2)* Modify `classic_gs.m` to construct a QR factorization using Householder reflections (without calling the `matlab` function QR). Specifically, implement Algorithm 10.1 in the book. Name the file `householder_qr.m`. Run Experiments 1 and 2. What do you observe about the orthogonality and normalization errors? Include a sample of the (text) output for each experiment.

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