Stochastic Control and forecasting

Those pursuing this area will become proficient in Kalman filters, as initially seen from recursive least

squares and forecasting ideas for Stochastic Processes. Those of you with Bayesian statistics

backgrounds can also view this as Kalman filters from that perspective. This has many broad

application areas, and we cover this material at multiple times throughout the class. Most projects in

this category will be using MATLAB, though the cohort is certainly allowed to use R or Python. A paper

that we will cover in class and that gives some sense for what a ‘near-expert’ should master is the

Young et al 1999 paper (material in Module 8).

Young, Peter C., Diego J. Pedregal, and Wlodek Tych. "Dynamic harmonic regression." Journal

of forecasting 18, no. 6 (1999): 369-394.

<https://blackboard.jhu.edu/bbcswebdav/pid-6212338-dt-content-rid-76819817_2/courses/EN.625.714.81.SP19/Young_et_al-1999-Journal_of_Forecasting.pdf>

<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.146.3061&rep=rep1&type=pdf>