Final Exam scope (June.07, Tuesday)

1. Mid-term exam
2. Machine learning

% in the exam, no code but some concepts / principle

* 1. KNN : results due to different number of neighbors

-Classification:

-Regression:

2.2 Linear Model

- Regularization effect: Ridge / Lasso

2.2) classification:

- Support vector machine

- Decision Tree

2.3 PCA

- What is PCA

* 1. T-sne : A wonderful idea.
  2. K-means

2.6 DBSCAN

3. Dynamic Programming   
 Problem 6.1-1 (p.283)

4. Markov process – steady state probability

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4. DT LQR Optimal Control Problem

Problem:

* plant
* Quadratic Index

Derive the optimal controller using

-HJB : (2.4-12)

-LQR with Output Feedback (8.1-28)

-MDP (Ex.11.2-30)

5. Policy iteration algorithm

Ex. https://www.youtube.com/watch?v=mdgRm2nFtOU