# Statistical Learning for Engineers (EN.530.641)
# Homework 9

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*Note that this assignment is a team work.*

**1** Solve Exercise Problem 3.8 in Ch. 3, Sec. 3.3 in RL book (p. 56).

**2** Solve Exercise Problem 3.14 in Ch.3, Sec. 3.5 in RL book (p.60). Note that the policy is equiprobable random in this problem.

**3** Let us consider Example 4.1 in Ch. 4 (p. 76) in RL book (also Fig. 4.1 in Ch. 4 in RL book, p. 77). Solve this problem by using the Policy Iteration. Write your python code, and report the final value function and the optimal policy. Use the equiprobable random policy.

**Submission Guideline**

- For analytic parts (e.g., problems 1 and 2) and answers/plots from computational problems, submit your homework answers in a single pdf format to "HW9_analytical" on the gradescope. Name the file as "TEAMnumber_MemberInitials_HW9.pdf".
  For example, "TEAM2_AC_JC_QL_HW9.pdf" if your team is #2 with three TAs' names.
- Submit all your python codes in a single .zip file that contains codes for each problem (name them by including the problem number). Name your single zip file submission as "TEAM-number_MemberInitials_HW9.zip". Submission will be done through "HW9_computational" on the gradescope.
- Make sure to include *all the necessary files*. If TAs try to run your function and it does not run, then your submission will have a significant points deduction.

- Make as much comments as possible so that the TAs can easily read your codes.
- Submission should be done by only one member of your team. Hence the report must clearly state team members, with workload distribution.