Homework 3: Introduction to Machine Learning, Spring 2018

Due: 2:00 pm, April 4 (Wednesday)

For computer exercise, use `prostate data` available at
https://web.stanford.edu/∼hastie/ElemStatLearn/datasets/prostate.data
https://web.stanford.edu/∼hastie/ElemStatLearn/datasets/prostate.info.txt

1. (20 pts) Show detailed derivation of GP regression algorithm.

2. (10 pts) Show detailed calculation of the marginal likelihood in GP regression.

3. (20 pts) Do your own work to generate Fig. 15.3 (in Murphy's book), implementing your own GP regression code. You can generate the data by yourself or you can visit the e-class system to get the dataset.