6 In-class exercises

For (1) and (2) below, you’re choosing between two candidates to hire. Discuss the pros and cons of choosing one candidate over the other in the following situations.

1. Both are predicted to have the same productivity score of 75, but have the following probabilistic forecasts.

Choosing 1

Pros: Candidate 1 has much higher chances to have the real productivity of 75. If we want some worker has productivity around 75, we should choose candidate 1.

Cons:

The production of Candidate 2 has more variance. There is equal chance that candidate 2 can be higher productivity and lower productivity. If we are forming a team, and we real want that we can hire someone productive in the team (e.g. to teach other members), we can choose candidate 2.

1. Two “non-overlapping” forecasts:

In this case, we should choose C2(Candidate 2) since he has much higher mean productivity than C1. And even if in the very bad case that C2 is well below his mean productivity and C1 is well upon his mean productivity, C2 still has higher productivity.

1. You’ve formed a probabilist forecast for a particular value of the predictors, displayed below as a density. You then collect test data for that same value of the predictor, indicated as the points below the density. What is the problem with the probabilistic forecast?

The probabilistic forecast seems to be biased. The real values of y in test set are above the mean value. The problem may be that the window used is too wide. This reduced the variance but made a biased forecast.