

Here are the questions from [2.5 Cost functions in Bayesian decision theory - Quiz]

1. Now we know that the MMSE estimator is the posterior mean but what do we need to be able to calculate it?

Optional Answers:

1. We only need to know the posterior density in order to calculate the posterior mean.
2. We need the posterior mean and the cost function to be able to solve the required minimization problem.
3. We only need to know the prior density in order to calculate MMSE estimator because it is independent of our observation, y .
4. We only need the likelihood function and the observation as the MMSE estimator is not dependent on the prior.

2. What happens when we take the expected value of a deterministic (non-random) variable?

Optional Answers:

1. As it is deterministic, the expected value is simply the value of the variable itself.
2. It is not possible to take the expected value of a deterministic variable. It is mathematically ill-defined.
3. We can not say as it depends on the distribution of the deterministic variable.

Thank You