Elementary Bayesian Analysis

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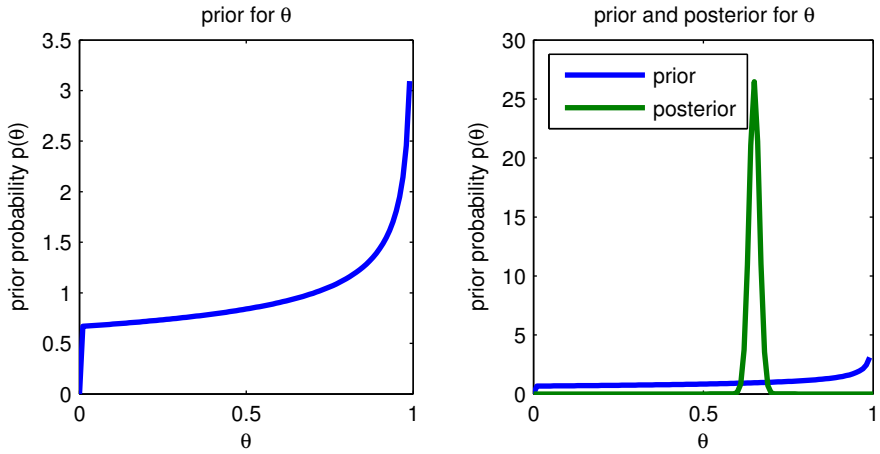

(a) An example of disease mapping

(b) An example of classification

Figure 1: Two examples of the applications of Bayesian modeling. In the figure 1(a), there is presented an example of the disease mapping problem, where the object is to study the spatial variations on the incidence/mortality risk of diseases. The map shows the spatial variations in the relative mortality risk of cerebral vascular diseases compared to the averige mortality level in Finland. The figure 1(b) is an example of a classification problem. The contours show the probability for a point in two dimensions belonging to class one (the red markers). The figure is from a toy problem, but classification is a general type of problem for wide variety of real world applications.

Exercise example

First, describe shortly,

- basic idea in the exercise
- the model you're constructing
- equations
- the results.

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Latex displays all the characters (also, for example, \,/,&)
as written.
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Add figures related to this exercise in this section, not in the abstract or in attachment. Remember the caption for the figure, as in the figure 1.

From this part you obtain 0-5 points per exercise, so be clear on your writing. Remember that it is you, who suffers the most if assistant does not understand your text.

Discussion

Here, you may add discussion on the exercise. Possible topics for the discussion are, for example:

- What were the assumptions on the model/solution. Do you agree or disagree with them?
- Would you improve the model? If yes, how? If no, why?
- Could you imagine using this kind of model in real life? Where?
- What did you learn from the exercise?
- Did you find the exercise usefull? Explain.

Note! The above list does not reflect all the things you should include in the discussion. There are just few ideas to help you find a topic for it.