

Errors in the coursework handout:

Task 1.4: 4 marks

**** $P(A|B) = P(A \& B) / P(B)$. ****

Task 1.5: 5 marks (harder)

Reworded:

Finally complete the function Query which calculates the probability distribution over the root node of a naive Bayesian network. To represent a naive network in Python we will use a list containing an entry for each node (in numeric order) giving the associated probability table: [prior, cpt1, cpt2, cpt3, cpt4, cpt5]. You can calculate the prior of the root and the conditional probability tables between each child variable and the root using your solutions to Tasks 1 and 2. A query is a list of the instantiated states of the child nodes, for example [1,0,3,2,0]. The returned value is a list (or vector) giving the posterior probability distribution over the states of the root node, for example [0.1,0.3,0.4,0.2].

Results File

- The prior probability distribution of ****node 0**** in the data set
- The results of queries *****[4,0,0,0,5] and [6, 5, 2, 5, 5]***** on the naive network