Problem set # : Solutions

Unathi Skosana

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Some problem

Some about minimum information equation....

$$\frac{d}{d\varepsilon}\left[-\int p'(x)\ln\left(\frac{p'(x)}{u(x)}\right)dx-(\lambda_0-1)\int p'(x)dx-\beta(\int x^2p'(x)dx-s^2)\right]_{\varepsilon=0}=0$$

Something about the bayesian natural log factor for two hypothesis....

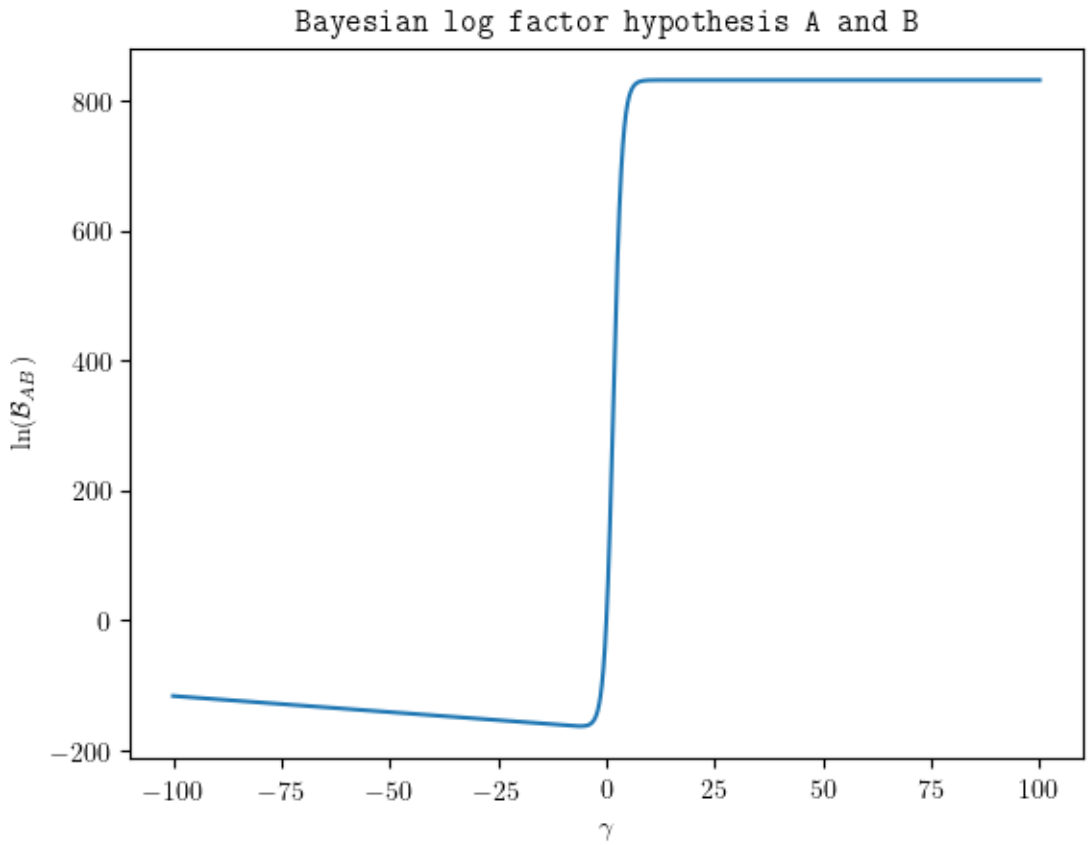

Figure 1: Bayesian Log Factor

some other problem

Something about Stirling's approximation and crude approximations for the natural log of a factorial, and we compare them via a table.

n	f	f_1	$\frac{f_1-f}{f}$	g	g_1	$\frac{g_1-g}{g}$
5	120	118.01916	-0.01650	4.78749	11.66547	1.43665
10	3628800	3598695.61874	-0.00829	15.10441	33.72816	1.23300
15	1307674368000	1300430722199.468	-0.00553	27.89927	59.71520	1.14038
20	2432902008176640000	2.42278e+18	-0.00415	42.33561	88.25073	1.08455

It's whatever...