TDDE07 Bayesian Learning - Lab 4

Erik Linder-Norén - erino397

15 Maj, 2017

1. Poisson regression - the MCMC way.

(a)

In Figure 1 I have plotted the normal approximation of β_{MLE} with uncertainty. The β_{MLE} can be seen in Table 1. Significant covariates are MinBidShare, Sealed, VerifyID and MajBlem.

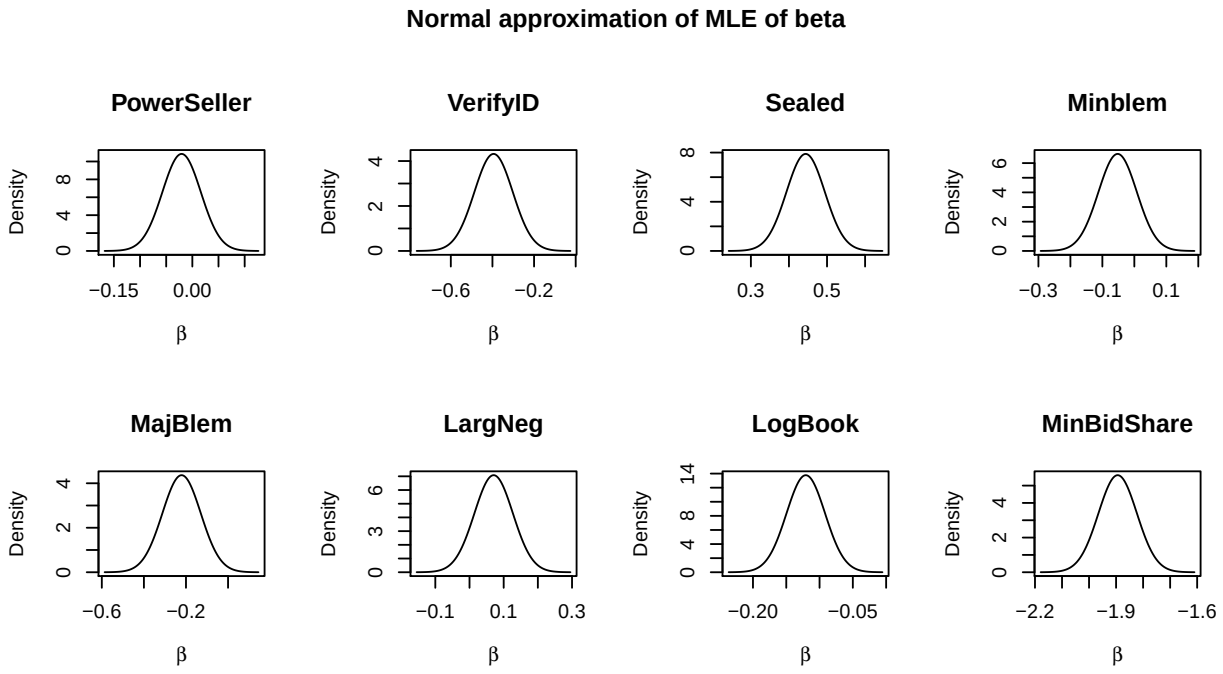

Figure 1: Normal approximation of MLE of beta

	Const	PowerSeller	VerifyID	Sealed	Minblem	MajBlem	LargNeg	LogBook	MinBidShare
1	1.072	-0.021	-0.395	0.444	-0.052	-0.221	0.071	-0.121	-1.894

Table 1: MLE of beta

(b)

By numerical optimization I determined the β_{MLE} coefficients to be the values seen in Figure 2. They closely resemble the values in the GLM model in (a).

	Const	PowerSeller	VerifyID	Sealed	Minblem	MajBlem	LargNeg	LogBook	MinBidShare
1	1.070	-0.021	-0.393	0.444	-0.052	-0.221	0.071	-0.120	-1.892

Table 2: MLE of beta by numerical optimization