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WORKSHOP ON BAYESIAN MODELING USING WINBUGS ATHENS 24-25/8/2010

Generalized Linear Models (LAB #2)

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Activity #1

- Implement the Binomial models illustrated from page 7–64 to page 7–76.
- Reproduce the same results as in these pages.
- Compare the three models under different links using DIC.

Activity #2

- Implement the Inverse Gaussian model illustrated from page 8–10 to page 7–16.
- Use both zeros and ones tricks and compare the results.
- Fit on the same data a gamma model using:
 - The command dgamma.
 - The zeros trick.
 - The ones trick.
 - Compare the results obtained by the 3 different codes.

[Use a log-link on the mean of the gamma distributions which is equal to α/β].

Activity #3

Fit the ANOVA model presented in page 5–79 to 5–86. Use both parameterizations and the corresponding dummy variables (see page 6–12 to 6–20). Compare the results from the different codes.

All page numbers refer to the presentation pages.