

Assignment 11

1. The file `planes.txt` contains 30 observations of 4 variables. You can read this into R using `read.table("planes.txt", header=T)`

The data is from 30 air force missions during the Vietnam war.

The 4 variables are as follows: y is the the number of damaged locations of the aircraft; $x1$ is the type of aircraft, 0 for A4, 1, for A6; $x2$ is the aircraft bomb load in tons; and $x3$ is the total months of aircrew experience.

Model y in JAGS using Poisson regression with a log link function. Use DIC to determine which of the three explanatory variables should be included in your model.

Once you have identified the 'best' model, use it calculate 95% prediction intervals for the amount of damage for both A4 and A6 planes, with a crew with minimal, average, and maximal experience, for a minimal, average, and maximal bombload.