

# The `lstbayes` package

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## 1 Introduction

This package provides language drivers for the `listings` package for the several Bayesian modeling languages: BUGS, JAGS, and Stan.

## 2 Usage

See the documentation of the `listings` package.

## 3 Implementation

```
1 \RequirePackage{listings}
```

### 3.1 BUGS

Language driver for BUGS, including WinBUGS and OpenBUGS. The driver is based on OpenBUGS v. 3.2.3.

```
2 \lstdefinlanguage{BUGS}{
3   keywords=[1]{for,in,model,T,I,C},%
4   morecomment=[1]{\#},%
5   sensitive=true,%
6   alsoletter={.},%
7   otherkeywords={<-,~},%
8   literate={<-}{\leftarrow}1 {~}{\sim}1%
9 }
10 \lstalias[] {OpenBUGS} [] {BUGS}
11 \lstalias[] {WinBUGS} [] {BUGS}
```

### 3.2 JAGS

Language driver for JAGS. The driver is based on JAGS version 3.4.0 (Sept 4, 2013).

```
12 \lstdefinlanguage[] {JAGS} [] {BUGS}{
```

```

13 morekeywords=[1]{data,var,const},%
14 morecomment=[n]{/*}{*/}%
15 }

```

### 3.3 Stan

Language driver for Stan. The driver is based on Stan modeling language version 2.8.0 (Sept 8, 2015).

```

16 \lstdefinelanguage{Stan}{
17   keywords=[1]{functions,data,parameters,transformed,model,generated,quantities,%
18     for,in,while,print,if,else,lp_,lower,upper,increment_log_prob,T,return,%
19     reject,integrate_ode},%
20   keywords=[2]{int,real,vector,%
21     ordered,positive_ordered,simplex,unit_vector,%
22     row_vector,matrix,%
23     cholesky_factor_corr,cholesky_factor_cov,%
24     cor_matrix,cov_matrix,%
25     void}%
26   otherkeywords={<-,~},%
27   sensitive=true,%
28   morecomment=[1]{\#},%
29   morecomment=[1]{//},%
30   morecomment=[n]{/*}{*/},%
31   string=[d]"%,
32   literate={<-}{\leftarrow}1 {~}{\sim}1%
33 }

```