Simply prefix your regression command with `bayes:

- Over 50 likelihood models supported, including multilevel, survival, GLM, and more
- Censoring, truncation, sample selection
- Intuitive and elegant model specification
- Default and custom priors
- Comprehensive Bayesian-features support

### Linear regression
Use default normal priors for coefficients and inverse-gamma prior for variance

```stata
.bayes: regress y x1 x2
```

Use Gibbs sampling

```stata
.bayes, gibbs: regress y x1 x2
```

### Logistic regression
Use default normal priors for coefficients

```stata
.bayes: logistic y x1 x2
```

Use custom Cauchy priors for coefficients on `x1` and `x2`

```stata
.bayes, prior(\{y:x1 x2\}, cauchy(0,2.5)): logistic y x1 x2
```

Check convergence of coefficient on `x1`

```stata
.bayesgraph diagnostics \{y:x1\}
```
Generalized linear model
Use burn-in of 1,000 and MCMC size of 5,000

```
. bayes, burnin(1000) mcmcsize(5000): glm y x1 x2,
       family(binomial) link(log)
```

Test that coefficient \( y:x1 \) is greater than 4

```
. bayestest interval {y:x1}, lower(4)
```

Survival regression
Declare survival data

```
. stset time, failure(died)
```

Fit Bayesian exponential regression

```
. bayes, saving(mcmc_exp): streg x1 x2,
       distribution(exponential)
. estimates store exp
```

Fit Bayesian Weibull regression

```
. bayes, saving(mcmc_weibull): streg x1 x2,
       distribution(weibull)
. estimates store weibull
```

Compare models using Bayes factor

```
. bayestats ic exp weibull, bayesfactor
```

Other regression models
Ordered logistic regression

```
. bayes: ologit y x1 x2
```

Conditional logistic regression

```
. bayes: clogit y x1 x2, group(id)
```

Poisson regression

```
. bayes: poisson y x1 x2
```

Zero-inflated negative binomial regression

```
. bayes: zinb y x1 x2, inflated(z1 z2)
```

Multilevel regression

```
. bayes: mixed y x1 x2 || id:
```

And more

```
. bayes: ...
```

Perform any analyses using GUI

```
stata.com/features/overview/bayes-prefix
```

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