

RETHINKING GENERATES STAN CODE

```
data{
  vector[352] y;
  vector[352] x;
}
parameters{
  real a;
  real<lower=0> b;
  real<lower=0> sigma;
}
model{
  vector[352] mu;
  sigma ~ exponential( 1 );
  b ~ lognormal( 0 , 1 );
  a ~ normal( 0 , 20 );
  for ( i in 1:352 ) {
    mu[i] = a + b * x[i];
  }
  y ~ normal( mu , sigma );
}
```

Stan

<https://mc-stan.org/>

Stan Dev

<https://github.com/stan-dev/stan>



SAMPLER ARGUMENTS

- Chains: fit the model several times
- Cores: do the fits in parallel
- Iterations: how many total samples
- Warm-up (or burn-in): starting samples that get discarded

Model summary

```
> precis(fit)
```

	mean	sd	5.5%	94.5%	n_eff	Rhat4
a	112.97	2.00	109.83	116.19	1013	1.01
b	0.92	0.04	0.86	0.99	1004	1.01
sigma	5.08	0.20	4.78	5.40	1543	1.00

Chains and convergence

