

PyMC

PyMC

- Written in Python
- Chris Fonnesbeck

fonnesbeck@mac.co

- We will work with PyMC-1

http://trichech.us/files/pymc_users_guide.pdf

- PyMC-2 has totally different architecture
 - beta

Basic structure

- Model class holds
 - init definition
 - model definition
- Parameters must be declared and initialized
- Priors and likelihoods specified as methods in model def

Example

- 1-sample binomial
- [binomial.py](#)

Example

- Simulate m-sample binomial
- [binomial_sim.py](#)

Example

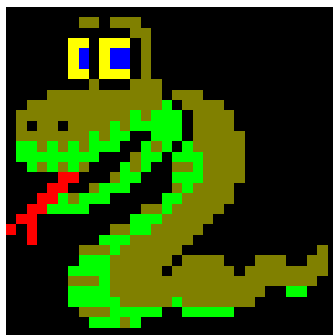
- Simulate m-sample binomial
- Model with random effect
 - Logit normal p
 - Normal prior on μ
 - Half-normal prior on SD
- [binomial_re.py](#)

Example

- Normal regression
- X, Y on matched sample
 - Predict missing Y
 - [regression_y.py](#)
 - Predict missing X
 - [regression_x.py](#)

Example

- State-space modeling
 - Binomial survival process
 - Poisson recruitment process
- Likelihoods
 - Binomial survival samples
 - Binomial age proportion samples
 - Normally distributed surveys
- [state.py](#)



Gen.py