### Markov Chain Sentence

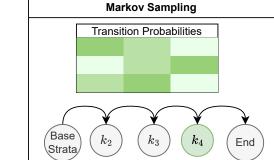
## Sentence Builder, ${\cal S}$ $S \equiv \{k_1, k_2, k_3, \dots\}$

e.g. [BaseStrata, Sediment, Fault, Fold]

# Request Sentence $S\sim ho_s$

Dataloader

Interface



For  $k_i$  in S map key to  $ext{GeoWord} \ w_j \sim 
ho_{k_i}$ 

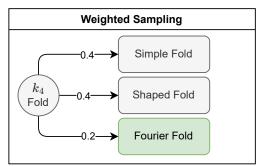
Apply history

 $\{p_{i1}, p_{i2}, p_{i3}, \dots\}$ 

to model

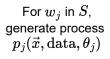
### **GeoWord Sampling**

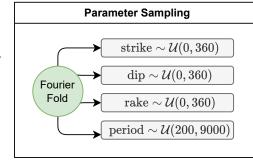
Sentence Formed of Geowords,  $w_i$  $\{w_1, w_2, w_3, \dots\} \leftarrow \{k_1, k_2, k_3, \dots\}$  e.g. [Bedrock, CoarseSediment, SingleFault, FourierFold]



### GeoProcess Construction

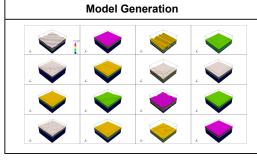
## **GeoProcess with Sampled Parameters** $\{p_1,p_2,p_3,\dots\}\leftarrow\{\dot{w}_1,w_2,w_3,\dots\}$ e.g. Fold(strike=30,dip=10,rake=10,period)





# Computation

**Histories Applied to Generate Models** 



Tensors

(Optional) Sentence Tokens or Descriptors