

MARKOV CHAIN

$$\begin{bmatrix} P_A(i+1) \\ P_B(i+1) \\ P_C(i+1) \end{bmatrix} = \begin{bmatrix} P_{A \rightarrow A} & P_{D \rightarrow A} & P_{C \rightarrow A} \\ P_{A \rightarrow B} \\ P_{A \rightarrow C} \end{bmatrix} \cdot \begin{bmatrix} P_A(i) \\ P_B(i) \\ P_C(i) \end{bmatrix}$$

BY THE AXIOMS OF PROBABILITY, COLUMNS MUST SUM TO UNITY.

. \rightarrow TIME

P2 \rightarrow BASEPAIRS IN A GENOME