

Storing Data

Holding on to the useful stuff.

- Storing pitch and octave in a nested list of nested lists.
- N lists where each list represents one measure
- Each measure (list) contains 64 sublists which represents a 64th unit of time
- Each 64th unit tracks every note in any staff being played at that instant

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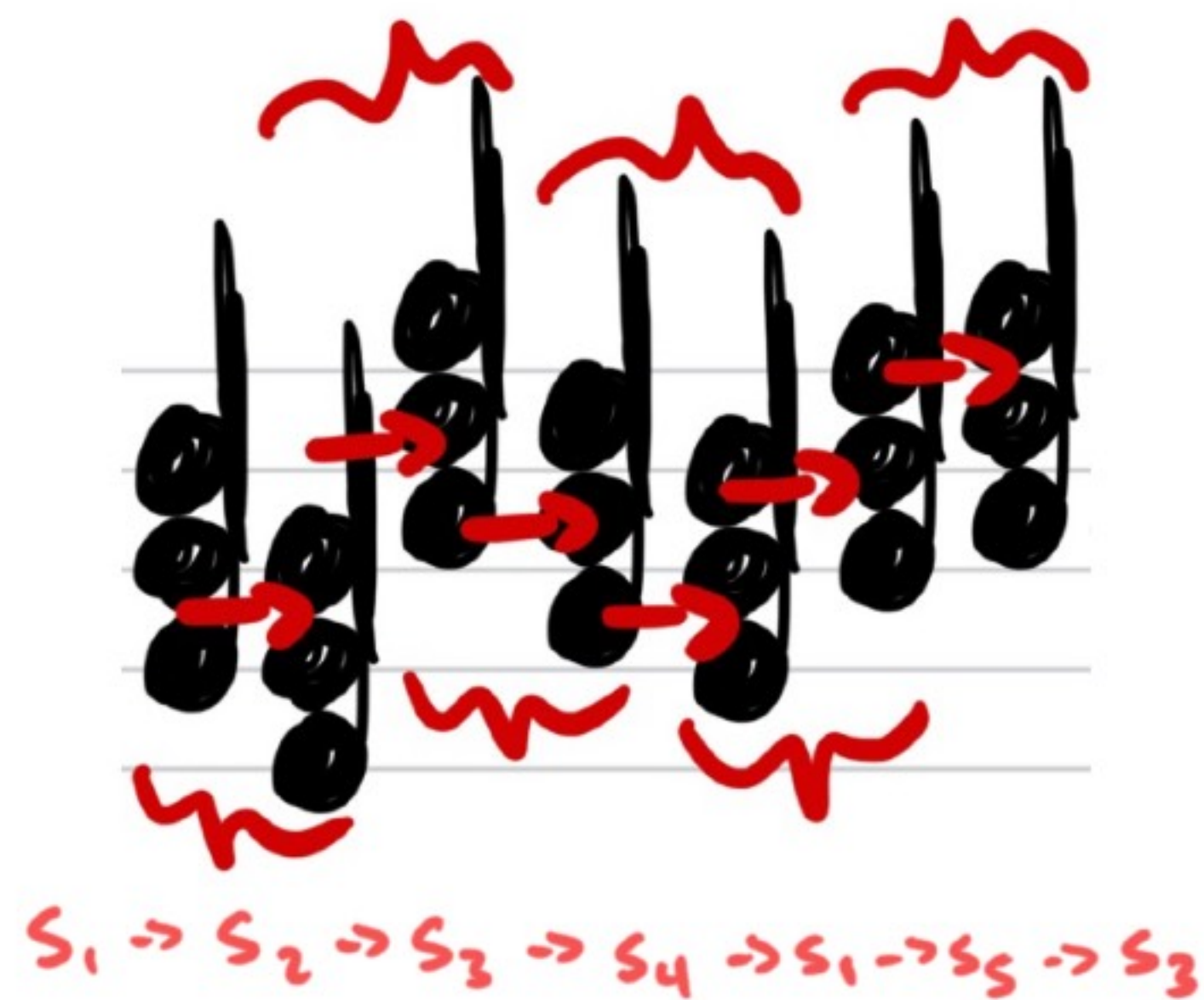
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Markov Chain (again)



$$\begin{matrix} & S_1 & S_2 & S_3 & S_4 & S_5 \\ \begin{matrix} S_1 \\ S_2 \\ S_3 \\ S_4 \\ S_5 \end{matrix} & \begin{bmatrix} 0 & 1 & 0 & 0 & 1 \\ 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 \\ 1 & 0 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 & 0 \end{bmatrix} & \rightarrow & \begin{matrix} & S_1 & S_2 & S_3 & S_4 & S_5 \\ \begin{matrix} S_1 \\ S_2 \\ S_3 \\ S_4 \\ S_5 \end{matrix} & \begin{bmatrix} 0 & 1/2 & 0 & 0 & 1/2 \\ 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 \\ 1 & 0 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 & 0 \end{bmatrix} \end{matrix}$$

make this matrix row-stochastic

$$\begin{matrix} & S_1 & S_2 & S_3 & \dots & S_{n-1} & S_n \\ \begin{matrix} S_1 \\ S_2 \\ S_3 \\ \vdots \\ S_{n-1} \\ S_n \end{matrix} & \begin{bmatrix} & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \\ & & & & & \end{bmatrix} & \end{matrix}$$

on a large scale