Dangling Pages

Ex: Consider the web below in which page 5 is dangling:

$$A = \begin{bmatrix} 0 & \frac{1}{2} & \frac{1}{3} & \frac{1}{4} & 0 \\ 0 & 0 & 0 & \frac{1}{4} & 0 \\ 0 & \frac{1}{2} & 0 & \frac{1}{4} & 0 \\ 1 & 0 & \frac{1}{3} & 0 & 0 \\ 0 & 0 & \frac{1}{3} & \frac{1}{4} & 0 \end{bmatrix}$$
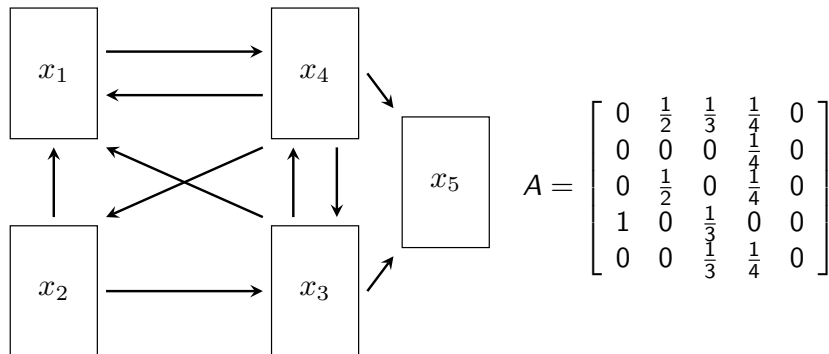
Exercise: Demonstrate for this web that the page-to-page matrix has a largest eigenvalue ≤ 1 and a corresponding eigenvector whose entries are non-negative.