Hyperlinks on websites are important for both humans and machines. But finding and adding missing links is hard. 66% of links added by editors in a month on Wikipedia are not clicked in the next month. Can we recommend missing links? Links that will be clicked will be useful. Use server logs as sensor for usefulness.

We consider all unlinked pairs of pages (S, T) and predict how often a link would be clicked if it were added to the site. The number of times a link (S, T) would be clicked is

\[ \text{Number of times link } (S, T) \text{ would be clicked} = \frac{\text{Number of times } S \text{ is visited} \times \text{Probability of clicking on a link to } T \text{ from } S}{\text{Known}} \times \text{Pr}(T|S) \]

We have built an experimental gadget in Visual editor in Wikipedia to recommend missing links to an editor who can add it with a single click. Our method is independent of language, captures recent external events and can indicate missing content. It also worked well on smaller websites.