

# Google PageRank Algorithm and Modifications

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PageRank was an algorithm used by Google search to rank web pages in their search engine results. PageRank was named after Larry Page,<sup>1</sup> one of the founders of Google. It is a way of measuring the importance of website pages. It relies on the uniquely democratic nature of the web by using its vast link structure as an indicator of an individual page's value. In essence, Google interprets a link from page A to page B as a vote, by page A, for page B. But, it looks at considerably more than the sheer volume of votes, or links a page receives; for example, it also analyzes the page that casts the vote. Votes cast by pages that are themselves "important" weigh more heavily and help to make other pages "important." Using these and other factors, it provides its views on pages' relative importance. In the seminar, we discuss the PageRank algorithm, mathematics behind the algorithm, and the implementation with a few examples and the necessary modifications which lead to its evolution.