

PageRank

Description

[From Wikipedia](#)

Applications

This is a link analysis algorithm for directed networks. Though originally designed to rank pages on the World Wide Web, it can also be applied to graphs such as citation networks.

Implementation Details

The *damping factor* is the probability that a random crawler of the network will continue to follow links.

PageRank is calculated with the power method, that is, by multiplying the transition matrix of the PageRank process by an initial arbitrary vector and repeating the multiplication until product stabilizes. The components of this stationary vector are the PageRank values of the nodes of the network.

The algorithm runs in $O(E)$ time where E is the number of edges of the network.

Links

- [Source Code](#)

Acknowledgements

The algorithm was implemented, integrated, and documented by Russell Duhon with additional documentation from Joseph Biberstine.

References

Brin, S., Page, L. (2001) [The Anatomy of a Large-Scale Hypertextual Web Search Engine](#). Proceedings of the seventh International Conference on the World Wide Web (WWW1998):107-117.

See Also

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