

Identifying Influentials by Example - the MVP (Most Valuable Player) Algorithm

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In this paper we introduce a method for finding the most relevant or “most valuable” person (where “valuable” refers to relevance towards a search term or query) inside a social network through creating a MVP-index (most valuable person index). The basic idea is that people “close” to a person with a desired property (e.g. wealth, famous actor, respected scientist) share the same property. “Closeness” is defined by social network position and by shared attributes. An example for a network with appropriate properties would be the social network site xing.com. Xing is a social network for business people, mainly used by German speaking users.

Our MVP-algorithm consists of two main components. First component is the attribute ranking, depending on the relevance of the attribute towards the search term or query. Common text processing algorithms are used to identify shared attributes and determine the relevance level. The second component is the degree-of-separation to other MVP-ranked persons. The seed MVP-ranking is done through external sources, e.g. the list of Nobel Prize winning scientists, or the Forbes list of millionaires. Attribute- and MVP-rank can additionally be weighted with centrality of each person in the social network being analyzed. Thus, the index ranks persons according to their relevance towards a search term but also considers network centrality and pre-assigned persons of interest.