

# Influence Discovery in Social Networks



Influence discovery in social media has gained a lot of attention recently. Brands and agencies are often looking for tools that will help them identify key influencers in certain communities of interest, or help them to understand the influence their brands or executives have in their social networks. The underlying need to identify influencers is driven by the hypothesis that working with these key influencers, brands can leverage the influencers' presence in the community of interest to propagate brand messaging. Studying influencers also provides brands with insights into why and how members in a community might react to certain messaging.

While the concept is simple, the challenge lies in identifying influencers that are right for your brand and in your brand's community of interest. This begins with first understanding what does influence in social networks mean? Does simply having a lot of followers or reach imply that a user is influential? Does being mentioned multiple times in a conversation thread imply that a user is influential? Does being retweeted often imply that a user is influential? Is a user who tweets prolifically influential?

The answer lies in first understanding a brand or agency's need to identify influencers, and more importantly, the community of interest. If the objective is to simply increase visibility, then one would argue that having someone like Lady Gaga or Justin Bieber tweet about your brand is the solution. But then again, it does not take a rocket scientist or a whole bunch of social network analysis to conclude that celebrities are potential influencers. Similarly having an influencer who has been identified for their large reach, start posting about your brand may not give the expected results. One needs to understand if the user is reaching the right audience, and if the influencer is generating engagement from that audience, or is the communication going into a vacuum. This notion of reach is further confounded by the increasing role played by paid bot-networks that use intelligent, automated algorithms to make certain hashtags trend, or work to increase follower counts.

To find the right influencers, brands need to first identify the community of interest that they want to reach and then gain better understanding of the underlying social network of that community. Once the

structure of the social network is understood, several social network analytics can be brought to bear to find influencers. These include techniques based on graph theory and measures such as centrality and page rank. Unfortunately, few tools today use social network analysis to drive their influence discovery analytics. They use global (rather than contextual) statistics such as pre-computed influence scores, number of mentions, reach, and engagements to identify influencers and influence scores.

Rather than searching for users in social media that have a large reach, and then trying to understand their network, a more effective way of doing influence discovery is to start by first searching social media to collect posts of relevance to the brand's community of interest. This can be done using a tool with a powerful query engine that allows for searches based on a combination criteria, such as keywords, tags, regions, languages, user profiles, bios, follower count, etc. Once an initial set of relevant posts have been collected (which may be the millions), the next step involves removing posts and entities that are essentially noise (e.g., bot posts) and then further filtering the conversations by topics and identifying the community of interest. Top influential users and hashtags can then be identified using graph-theoretic approaches to analyze the underlying social network that represents the community of interest. Note that influence is defined in the *context of the community of interest* and the conversations in that community, as opposed to simply looking at global statistics related to followers, reach, engagement, impressions, etc. This approach produces a set of influencers that are directly relevant to the community of interest.

Scraawl, a social media analytics tools developed by BlueHalo, is one of the few social media analytics tools available in the market today that uses the theory of social network analysis for influence discovery. Scraawl's advanced search capabilities combined with its advanced analytics for bot detection, topic modeling, and influence discovery allow for the execution of a work flow as discussed above. Furthermore, Scraawl's social network graph visualization coupled with its friendship graph networks facilitates the discovery of influencers by providing insights about the community of interest and its structure.

### About Scraawl



Scraawl is a product of BlueHalo, a defense industry leader in artificial intelligence and machine learning technologies including text, video, and sensor data analytics. Our mission is to develop a comprehensive solution for brands to gain actionable insights by listening, searching, extracting, and analyzing social media conversations and large text corpuses. We have developed a set of advanced analytics that leverages the state-of-the-art in big-data, machine learning, natural language processing, and graph theory. Our business case centers on helping brands and agencies understand their global audience, manage customer experience, improve public relations, drive strategic growth, and develop new clients. With analytic capabilities across multiple languages, and its ability to execute on desktops, tablets or mobile devices, our goal is to provide all the analytics a user will ever need – at their fingertips, anytime, and anywhere. For more information on Scraawl, visit [www.scraawl.com](http://www.scraawl.com) to request a demo to learn more about the wide range of advanced analytics offered in Scraawl's professional, premium, or enterprise packages. You can also sign up for a free personal account and start exploring some of Scraawl's basic search and analytics capabilities.