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## An Algorithm for the Influence Maximization Problem Using Graph Clustering

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In the influence maximization problem we are interested in finding a given set of  $k$  vertices to activate in order to maximize the expected number of nodes that will eventually get activated in the network through a diffusion process. For this diffusion we assume the linear threshold model. We propose a new Clustering Greedy Algorithm (C-Greedy). The C-Greedy algorithm applies the Monte Carlo Greedy algorithm to partition the given network into clusters, and obtains the seed set from a combination of the seed set of each cluster by solving an integer linear program. Experimental results show that the C-Greedy algorithm has, in average, provided higher influence spread and lower running times than the classical Greedy algorithm on Watts-Strogatz random graphs, especially when the number of nodes is higher than 5000. C-Greedy was implemented in Julia language and used many Julia packages

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