

# Instances for “A Branch-and-Cut Approach for the Weighted Target Set Selection Problem on Social Networks”

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We provide the instances used in the paper “A Branch-and-Cut Approach for the Weighted Target Set Selection Problem on Social Networks”, by S. Raghavan and Rui Zhang, published in the *INFORMS Journal on Optimization* (<https://doi.org/10.1287/ijoo.2019.0012>) . This repository contains the 260 instances used in the paper.

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All the instances used in the paper are provided in a compressed archive. The accompanying data is contained in the following file:

- *InstancesWTSS.zip*

**Description:** There are two main folders: One called “*Real-World Graphs*” contains 180 instances based on real-world graphs. The other one called “*Simulated Graphs*” contains all instances based on simulated graphs. Within the Simulated Graphs folder, 50 200-node instances are in the “*200 Nodes*” folder and 30 large instances are in the “*Large*” folder.

For each text file, there are  $m + 2$  lines. The first  $m$  lines provide the edges in the graphs. Nodes are labeled from 0 to  $n$  where  $n$  is the largest number in the first  $m$  lines. The  $(m + 1)$ th line contains the weight ( $b$ ) for each node. The  $(m + 2)$ th line contains the threshold value ( $g$ ) for each node.