# Sentiment Analysis of Tweets using Graph Models

1. **Who:** Harrison Lu, Michelle Xu
2. **Keywords:** Sentiment Analysis, Word Graphs, Graph Similarity
3. **What:** Analyzing sentiment of short blurbs of text- whether they are positive, negative, or neutral toward a target subject.
4. **Why:** Useful to have an easy, automated method of gauging general public opinion of target subject by analyzing a public forum such as Twitter.
5. **How:** Generate ground truth of the graph structure of a positive/negative/neutral tweet, compare graph structure of novel tweet to ground truth.
6. **Link to Repo:** https://github.com/classicalfreak96/SentimentAnalysisGraphModel
7. **Resources:**
   1. Dataset(s) (including link/resource)
      * 1.6 million tweets extracted using Twitter api. Contains 6 fields: polarity, ID, date, flag, user, and text.
      * kaggle datasets download -d kazanova/sentiment140 (github repository)
   2. Literature/Paper(s) (including links – if applicable)
      * Castellucci, G., Croce, D., & Basili, R. (2015). A Graph-based Model of Contextual Information in Sentiment Analysis over Twitter. *Proceedings of the Second Italian Conference on Computational Linguistics CLiC-it 2015,*72-76. doi:10.4000/books.aaccademia.1332
      * Arora, S., Mayfield, E., Penstein-Rose, C., & Myberg, E. (n.d.). Sentiment Classification using Automatically Extracted Subgraph Features. *Carnegie Mellon University*.
      * Koutra, D., Parikh, A., Ramdas, A., & Xiang, J. (2011). Algorithms for Graph Similarity and Subgraph Matching. *Carnegie Mellon University*. Retrieved November 11, 2018.
      * Violos, J., Tserpes, K., Psomakelis, E., Psychas, K., & Varvarigou, T. (2016). Sentiment Analysis using Word-Graphs. *Proceedings of the 6th International Conference on Web Intelligence, Mining and Semantics - WIMS 16*. doi:10.1145/2912845.2912863
      * Castillo, E., Cervantes, O., Vilariño, D., Báez, D., & Sánchez, A. (2015). UDLAP: Sentiment Analysis Using a Graph-Based Representation. *Proceedings of the 9th International Workshop on Semantic Evaluation (SemEval 2015)*. doi:10.18653/v1/s15-2093

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