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Semantic genetic programming for sentiment analysis. (English) [Zbl 1354.68223](#)

Schütze, Oliver (ed.) et al., NEO 2015. Results of the numerical and evolutionary optimization workshop NEO 2015 held at September 23–25 2015 in Tijuana, Mexico. Cham: Springer (ISBN 978-3-319-44002-6/hbk; 978-3-319-44003-3/ebook). Studies in Computational Intelligence 663, 43-65 (2017).

Summary: Sentiment analysis is one of the most important tasks in text mining. This field has a high impact for government and private companies to support major decision-making policies. Even though Genetic Programming (GP) has been widely used to solve real world problems, GP is seldom used to tackle this trendy problem. This contribution starts rectifying this research gap by proposing a novel GP system, namely, Root Genetic Programming, and extending our previous genetic operators based on projections on the phenotype space. The results show that these systems are able to tackle this problem being competitive with other state-of-the-art classifiers, and, also, give insight to approach large scale problems represented on high dimensional spaces.

For the entire collection see [\[Zbl 1355.90002\]](#).

MSC:

- [68T05](#) Learning and adaptive systems in artificial intelligence
- [62H30](#) Classification and discrimination; cluster analysis (statistical aspects)
- [68T10](#) Pattern recognition, speech recognition

Keywords:

[semantic crossover](#); [sentiment analysis](#); [genetic programming](#); [text mining](#)

Software:

[ECJ](#); [GSGP](#); [GPLAB](#)

Full Text: [DOI](#)

References:

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