



CIKM2022

31st ACM International Conference on Information and Knowledge Management

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Hybrid Conference, Hosted in Atlanta, Georgia, USA

DISCO: Comprehensive and Explainable Disinformation Detection



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Motivation

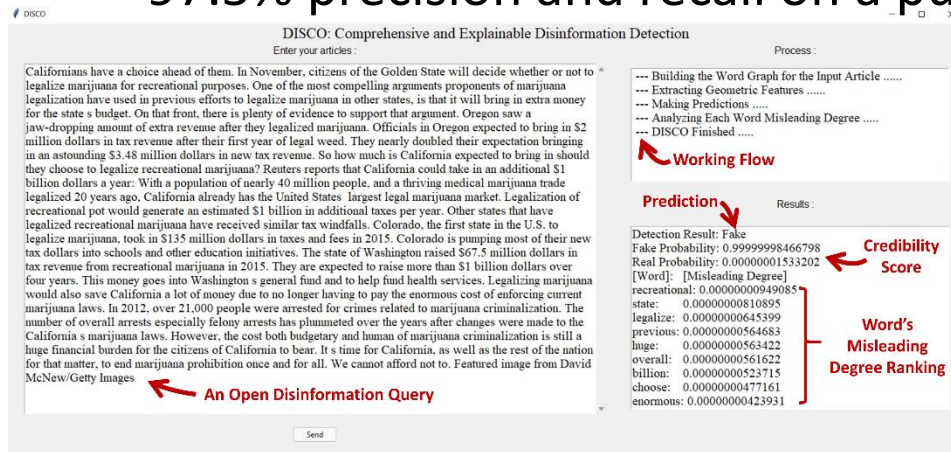
- Disinformation (e.g., fake news) is fabricated to mislead the general public. When we facing a piece of suspicious information,
 - Is a piece of suspicious information fake or real?
 - How to deal with polysemy in this piece of suspicious information?
 - Which words, phrases, or sentences are dominant in determining this information fake or not?



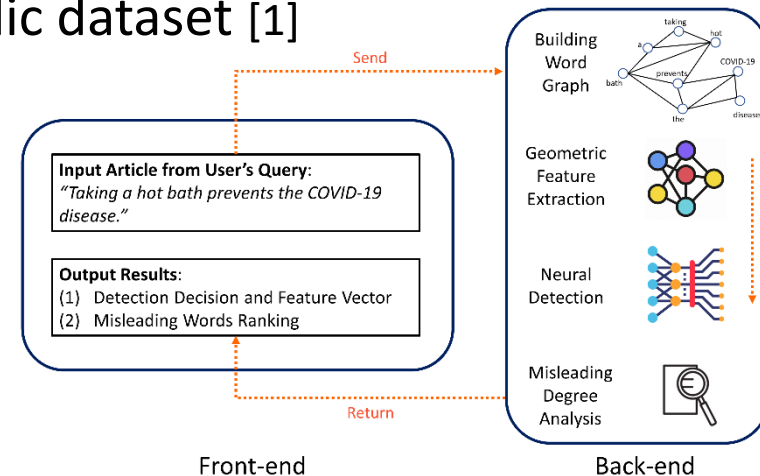
Real or Fake?

Disinformation Detection and Explanation: DISCO

- Input: A suspicious news article
- Output:
 - (1) The fake news probability, (2) Misleading degree of each word
- Techniques and Architecture
 - (1) Word graph construction, (2) Geometric feature extraction
 - (3) Neural detection, (4) Misleading degree analysis
- Performance
 - ~97.5% precision and recall on a public dataset [1]



User Interface of DISCO



System Architecture of DISCO

Resources

- Online Repository: <https://github.com/DongqiFu/DISCO>
 - Code: Python
 - Pretrained Language Model
 - DISCO Demo
 - User Interface
 - Datasets: Real-World Fake News and Real News [1]
 - 21,418 real news items
 - 23,538 false news items
 - Data format: (title, text, subject, date, label)
 - Video: Use Case of DISCO



[1] Hadeer Ahmed, Issa Traoré, Sherif Saad: Detecting opinion spams and fake news using text classification. Secur. Priv. 1(1) (2018). <https://www.kaggle.com/clmentbisailon/fake-and-real-news-dataset>



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Thanks!



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