

# Technical Details

finding email correspondents in online social networks

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# Two Assumptions or More...

**Profile-based** [1]: Match the email accounts and social network accounts according to the profile information. We can regard it as a **string similarity** problem.

information.

**Graph-based** [1]: If two persons communicate well by email, they may have a good chance to be connected in a social network. We can regard it as a **graph matching** problem.

**Temporal effects**: If two persons communicate well by email, they may have a good chance to be connected in a social network in the **near time**.

**Traffic-based**: Assign different weights to network links based on **network communication traffic**.

# Challenges

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Incorporating  
more  
information

Local Graph  
Match

Data Quality

Data Access

# Some Existing Solutions

Profile-based [1]: **Cosine similarity, Jaro-Winkler similarity...**

— PM algorithm

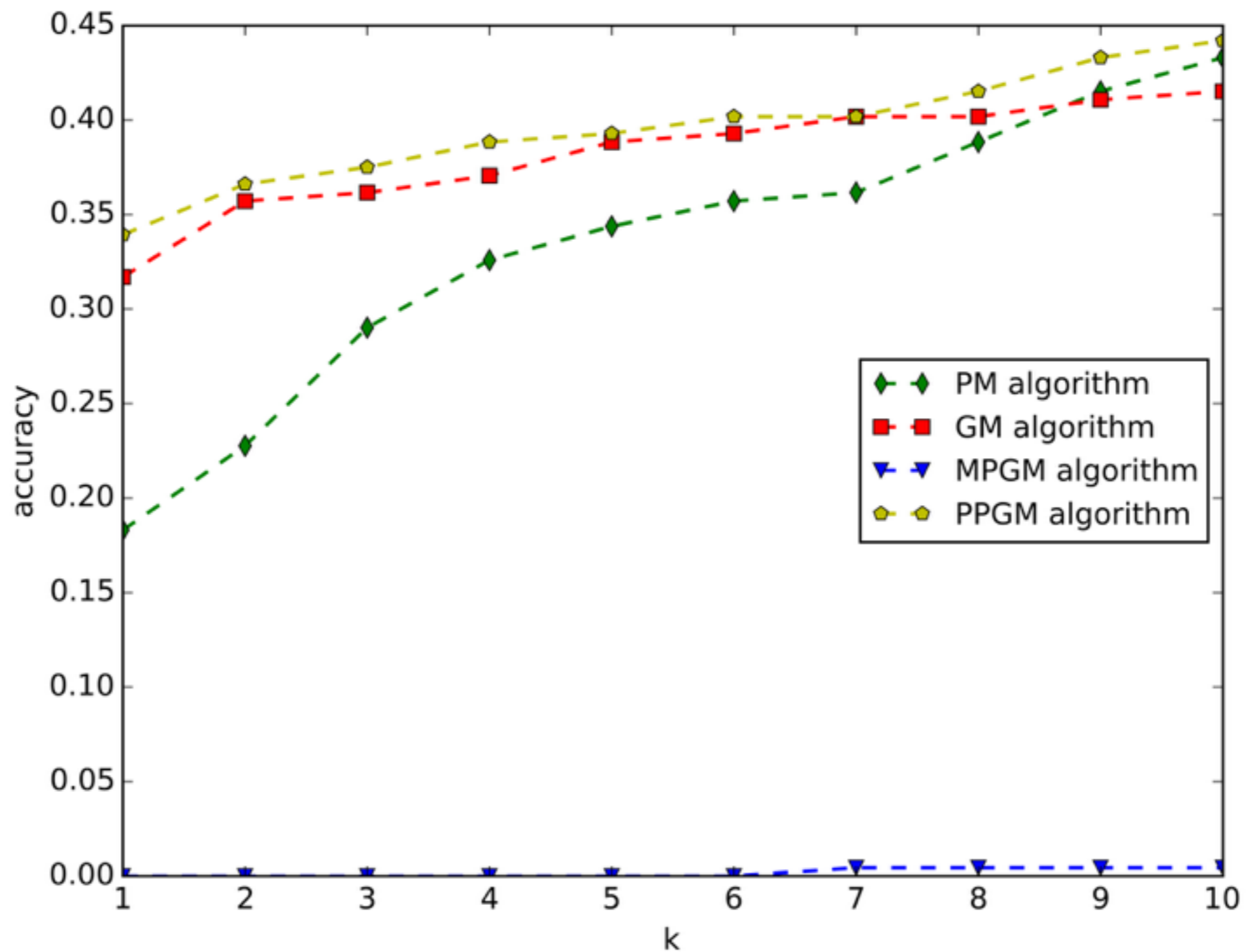
Graph-based [1]: **Fuzzy Jaccard similarity...**

— GM algorithm

Hybrid algorithms [1,2]: **Profile + Graph**

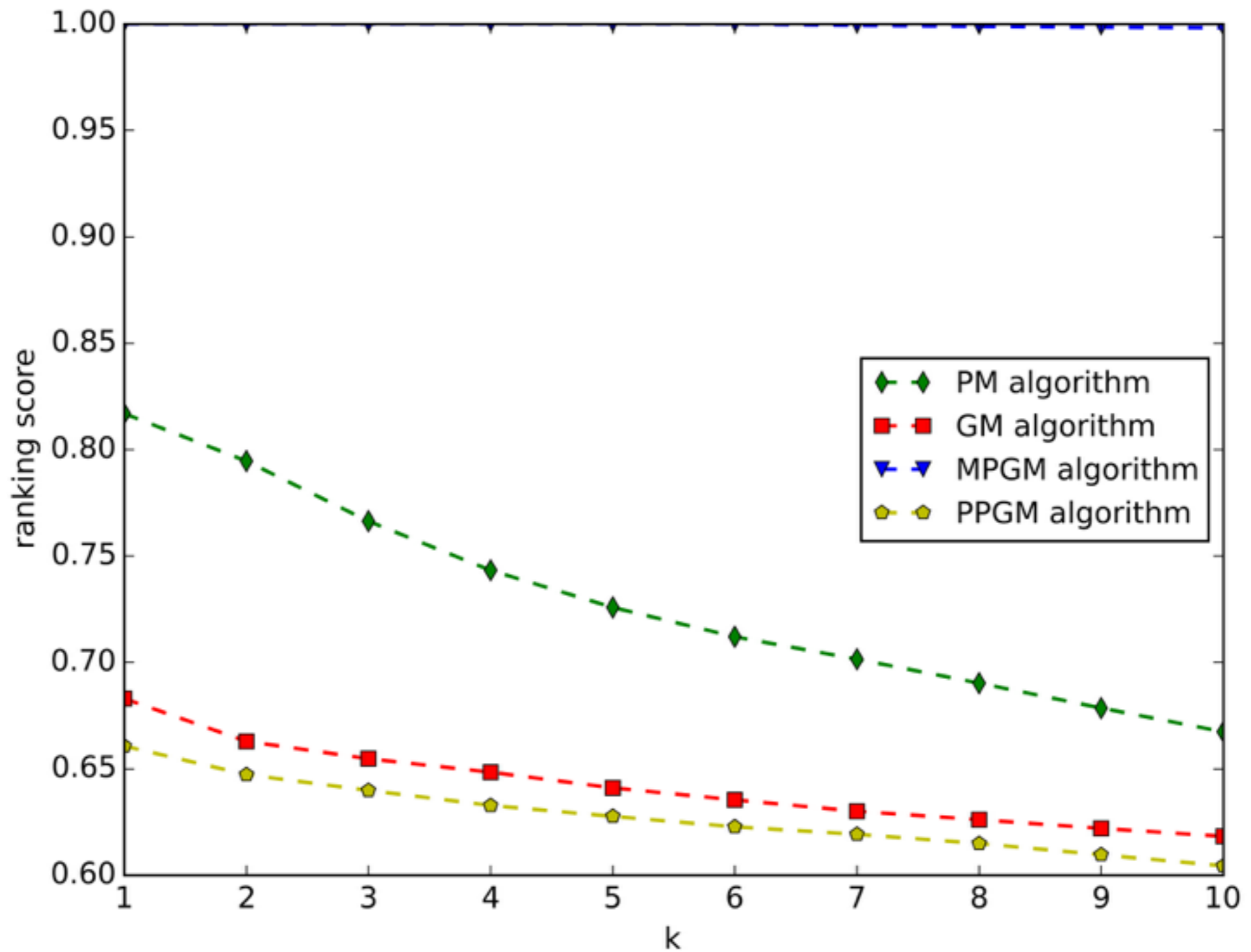
— MPGM & PPGM

# Experiments





# Experiments (cont'd)



# References

- [1] Cui, Yi, et al. "Finding email correspondents in online social networks." *World Wide Web* 16.2 (2013): 195-218.
- [2] Vesdapunt, Norases, and Hector Garcia-Molina. "Identifying Users in Social Networks with Limited Information." (2014).