

Write a readme.pdf that includes a thoughtful analysis of the results. (.75-2 pages 1.5spaced)

Some ideas to consider:

- *Which similarity metric seemed to work better? Why do you think that is?*
- *What input files did better than others?*
- *Did normalization help? In what cases?*
- *If you used a different vector model (more below) what did you notice about your results?*

All non-normalized metric cases had similar results. “gram6-nationality-adjective” had the highest accuracy (63-64%), followed by “family” (24%) and capital-world” (18-19%).

There was no difference between normalized and non-normalized analogies; perhaps my calculations for normalization are wrong, but according to the definition of

normalization ($\sqrt{\sum_{i=0}^n v_i^2}$, where v is the number in the i dimension/row of the vector) it

should be fine. It is possible that the definition I am using of normalization and the one used for the purposes of this class don't match, or that numpy's arrays are not functioning the way I understand they do: my calculations work by operating inside of every vector array, and getting a new one out of that, then adding it all up, and then rooting it. Or, perhaps, the differences between normalized and non-normalized vectors are so small that when operating on them, they are rounded up and so not visible.

In any case, without a significant in the results between metrics and normalization, there's not much to analyze beyond the prediction accuracy according to the input file. In all cases, the difference between each metric according to the file was between 0.01 and 1.5%, which is too little of an increase to say (a priori) that it is a significance difference.