

Argumentative Zoning - An Industry Practitioner View

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Question 1:

Academic research suffers from problems of lack of organization for research papers based on their content. The content of research is multivariate, multifaceted. Outside of citations, there is no concrete way to build a taxonomy or a knowledge graph that researchers might use to make themselves aware of similar, related or contrasting work. What if we build a multi-relational graph by incorporating the argumentative zoning approach advanced by the paper. The idea is to use the annotation scheme to build a knowledge-base segmented by different categories, and then subsequently generating graph edges between nodes that have a similarity score over a particular preset threshold.

For example;

For category AIM, you want to generate bidirectional edges for work that has the same research objective, or is trying to focus on the same problem space. But what does “same” even mean? Like, it feels very wishy-washy to say two problem statements are about the same thing. So first of all to even evaluate their similarity in any meaningful way... And any meaningful non-manual way that is, you need to pack the information in numbers. The vector representations of the two ideas should have similar vector representations; they are processed, then fed as input into a neural network for classification.

(Skip thought vectors? Recursive auto-encoder)

For contrast you can have a comparison of what papers have the