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Image Re-Ranking based on Topic Diversity

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Abstract: The growth of web image retrieval is significantly helped by the free tags users can add to photographs on social media sharing services. One crucial technique for locating photos that users have uploaded on social networks is tag-based image search. It can be difficult to make the top-ranked result diverse and meaningful, though. To improve the topic coverage performance, we present a topic diversity ranking method for tag-based image retrieval in this study. Based on how similar one tag is to the others, we first create a tag graph. The topic community of each tag is then mined using the community detection approach. The final recovered results are then obtained by introducing intracommunity and inter-community.

Based on the multi-information of each topic community, the community is ranked using an adaptive random walk model in the inter-community ranking process. Additionally, to speed up the search, we create an inverted index structure for photos..

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