OVERALL APPROACH

INPUT RESULTS LIST
PRE-FILTER
RERANKER
OUTPUT RESULTS LIST
DIVERSIFIER

BINARY PREDICATES:
FACES, TEXT, BLUR
GEOLOCATION, NUMBER OF VIEWS,
DESCRIPTION LENGTH

LUCENE-BASED PHRASE PROXIMITY SEARCH

GREEDY MIN-MAX SIMILARITY DIVERSIFIER:
CN-CORR, SIFT-LSH
TIMEUSER, MONTHDELTA

DIVERSIFICATION FEATURES

FEATURES ARE EXTRACTED AND COMPARED TO PRODUCE SIMILARITY MATRICES FOR INPUT TO THE DIVERSIFIER

SIFT-LSH IMAGE SIMILARITY

CN-CORR

COLOR NAMING HISTOGRAM FEATURES
PAIRWISE HISTOGRAM CORRELATION

TIMEUSER
SIMILARITY MATRIX CONSTRUCTED WITH THE FOLLOWING CONSTRAINTS: PAIRS OF IMAGES TAKEN A LESS THAN A MINUTE APART HAD SIMILARITY 1; IMAGES MORE THAN 3.25 MINS APART HAD 0 SIMILARITY. BETWEEN 1 AND 3.25 MINUTES THE SIMILARITY FALLS OFF LOGARITHMICALLY.

MONTHDELTA
LIKE TIMEUSER FEATURE, IMAGES HAVE INCREASING SIMILARITY WITH CLOSER MONTH OF YEAR.

FEATURE COMBINATION

SIMILARITY MATRICES FROM THE DIFFERENT FEATURES WERE AVERAGED TO MAKE THE INPUT TO THE DIVERSIFIER

= \frac{1}{N} \sum_{n=1}^{N} \text{Input from Text Search}

DIVERSIFIER

ITERATIVE RE-RANKING BY MINIMISING SIMILARITY

INPUT FROM TEXT SEARCH

GREENE MIN-MAX SIMILARITY DIVERSIFIER

RE-RANKED OUTPUT

RUN CONFIGURATIONS

P@10 CR@10 F1@10

1
0.70
0.77
0.67
2
0.82
0.74
0.73
3
0.82
0.75
0.73

EXPERIMENTS IN DIVERSIFYING FLICKR RESULT SETS

CLIENT
MEDIAEVAL 2013
RETRIEVING DIVERSE SOCIAL IMAGES

TEAM
SOTON-WAIS
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