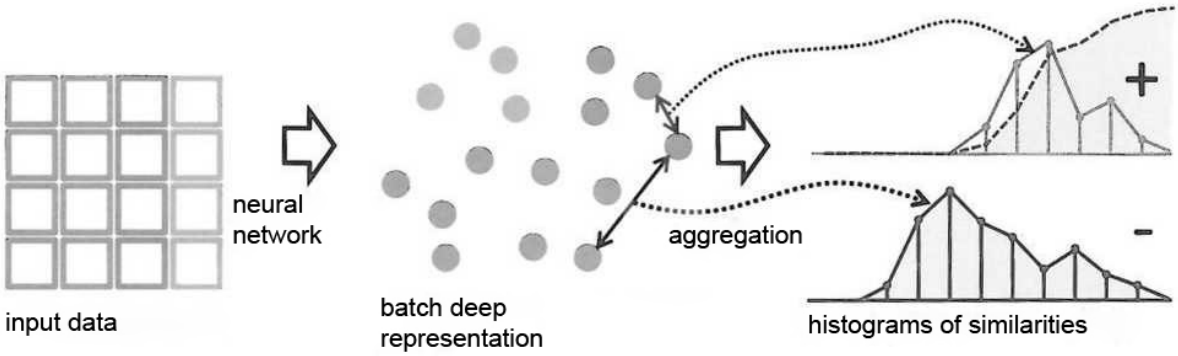

neural
network
input data
batch deep
representation
aggregation
+
-
histograms of similarities

Fig. 1

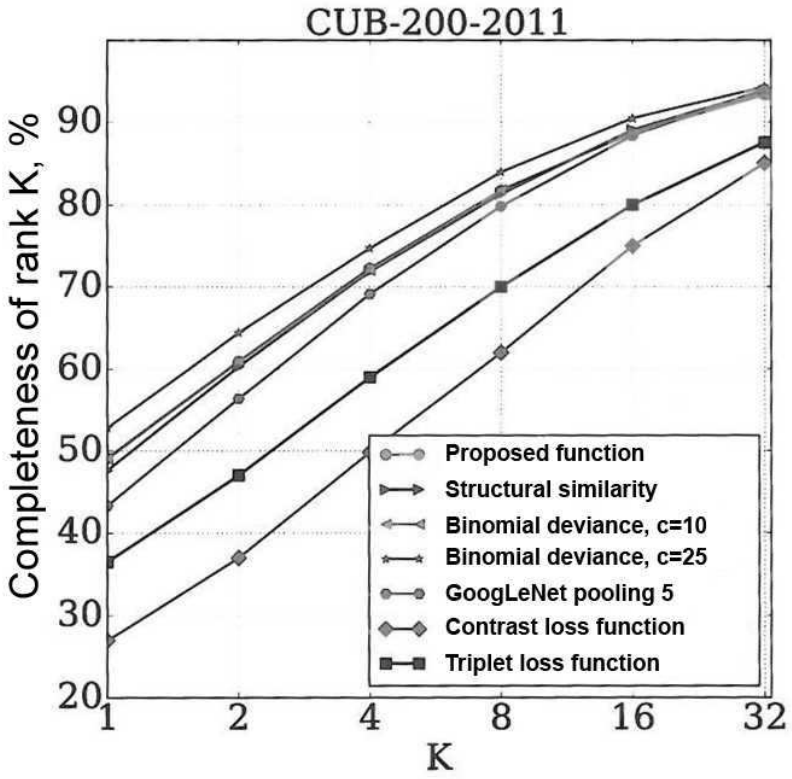

CUB-200-2011
Completeness of rank K, %
90
80
70
60
50
40
30
20
1
2
4
8
16
32
K
Proposed function
Structural similarity
Binomial deviance, c=10
Binomial deviance, c=25
GoogLeNet pooling 5
Contrast loss function
Triplet loss function

Fig. 2

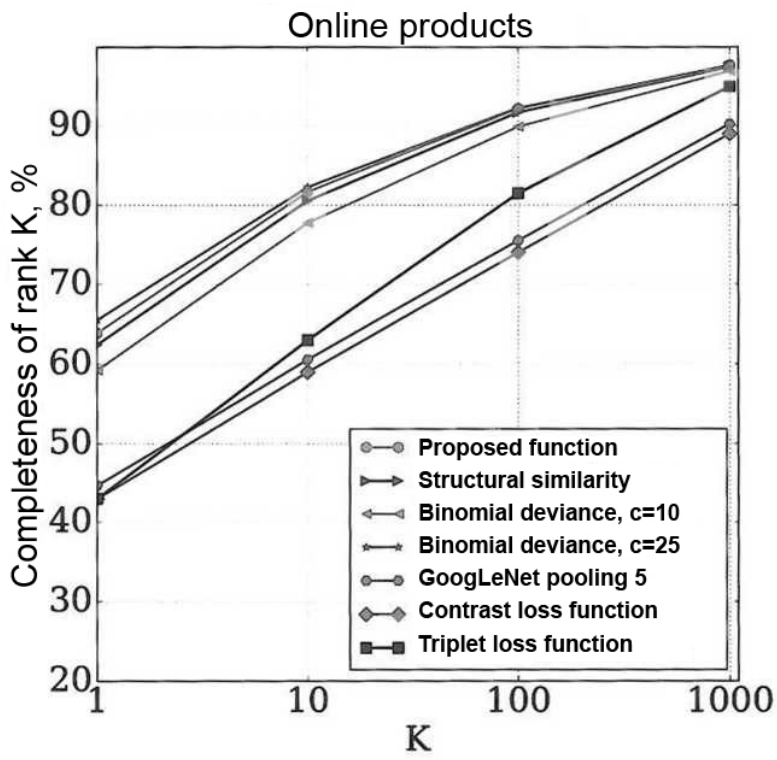

Online products
Completeness of rank K, %
90
80
70
60
50
40
30
20
1
10
100
1000
K
Proposed function
Structural similarity
Binomial deviance, c=10
Binomial deviance, c=25
GoogLeNet pooling 5
Contrast loss function
Triplet loss function

Fig. 3

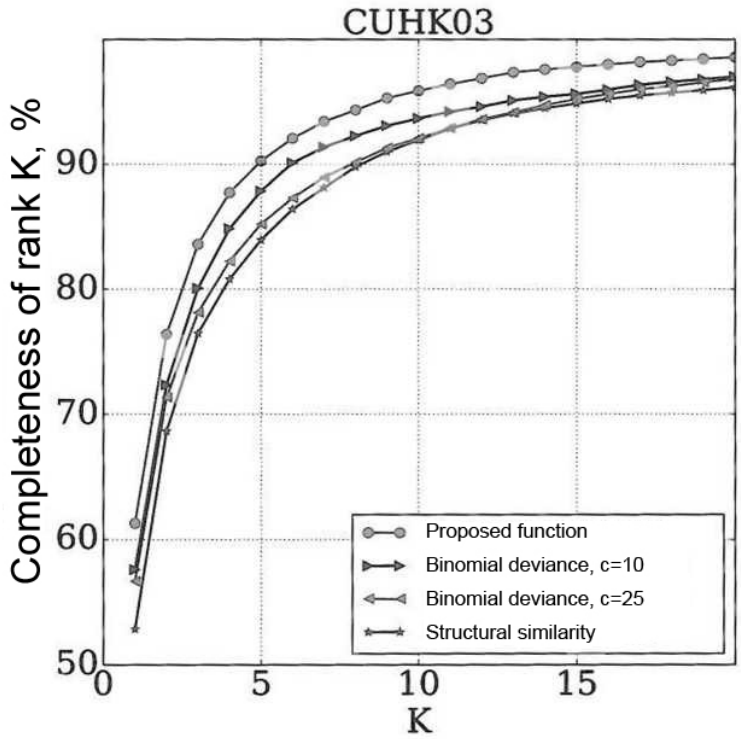
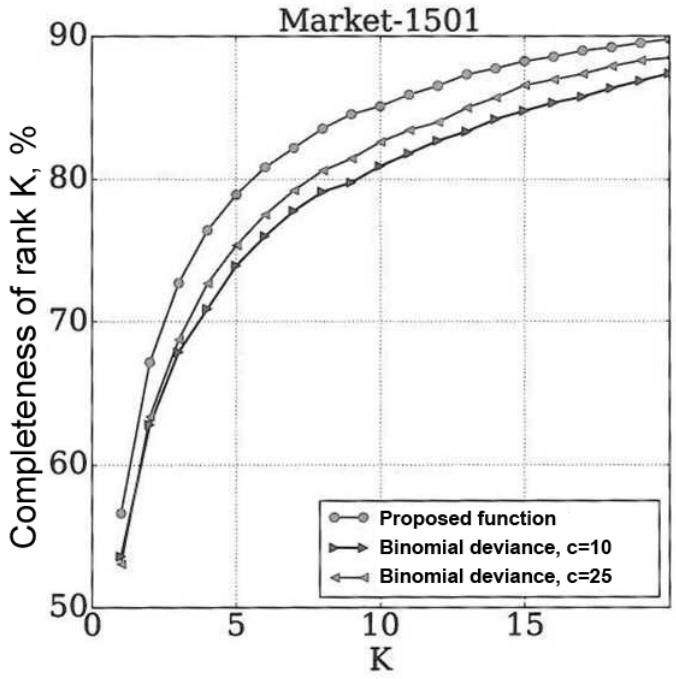

CUHK03
Completeness of rank K, %
90
80
70
60
50
0
5
10
15
K
Proposed function
Binomial deviance, c=10
Binomial deviance, c=25
Structural similarity

Fig. 4


Market-1501
Completeness of rank K, %
90
80
70
60
50
0
5
10
15
K
Proposed function
Binomial deviance, c=10
Binomial deviance, c=25
Fig. 5

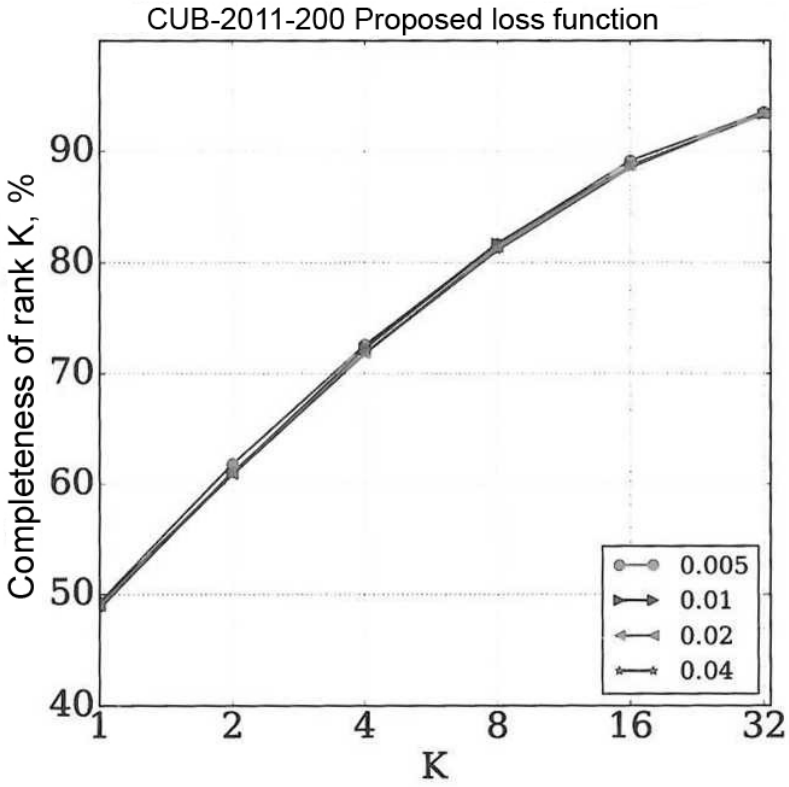

CUB-2011-200 Proposed loss function
Completeness of rank K, %
90
80
70
60
50
40
1
2
4
8
16
32
K
0.005
0.01
0.02
0.04

Fig. 6

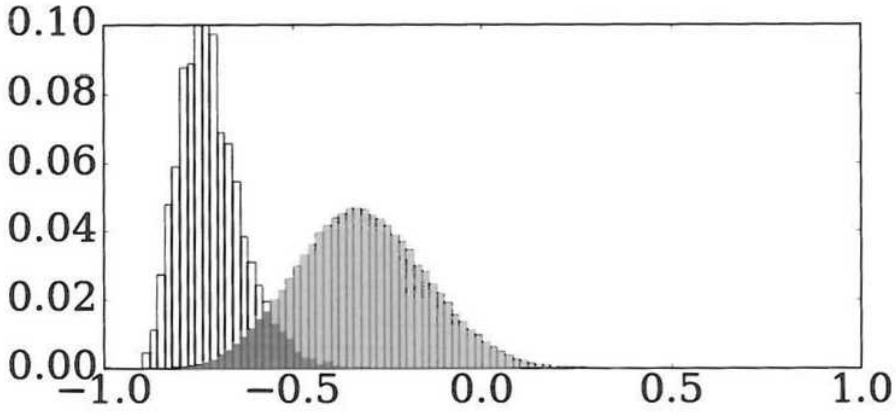


Fig. 7a

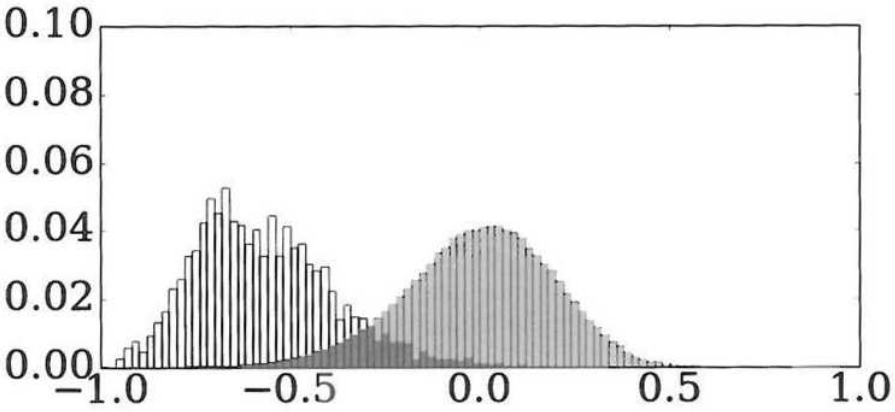


Fig. 7b

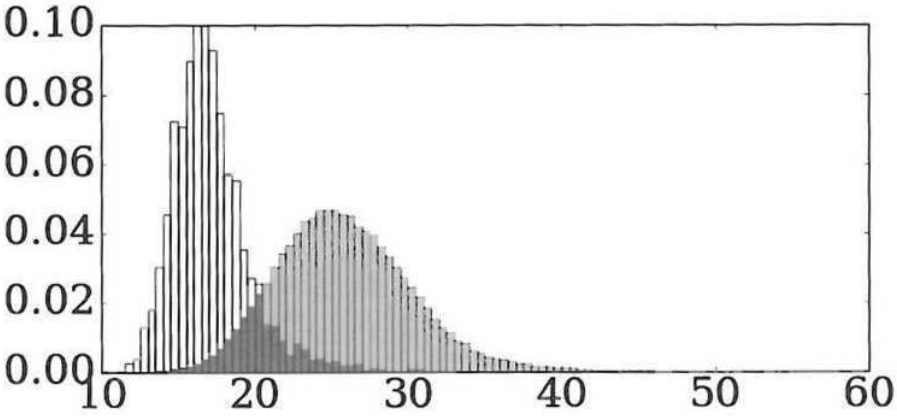


Fig. 7c