

Hash Codes Learning

Hadamard Matrix

1	1	1	1	1	1	1
1	-1	1	-1	1	-1	-1
1	1	-1	-1	1	1	-1
1	-1	-1	1	1	-1	-1
1	1	1	1	-1	-1	-1
1	-1	1	-1	-1	1	-1
1	1	-1	-1	-1	-1	1
1	-1	-1	1	-1	1	1
1	1	1	1	1	1	-1

Hash Centers based on Hadamard Matrix

1	1	1	1
1	1	-1	-1
1	1	1	1
1	1	1	1
1	-1	-1	-1
1	-1	1	1

Label matrix

0	0	...	1	0
...
1	0	...	1	0

$\tilde{\mathbf{Y}}^{(t)}$

1	1	...	1	1
1	1	...	-1	-1
1	-1	...	-1	1
1	-1	...	-1	1

$\vec{\mathbf{Y}}^{(t)}$

Hash Center Memory

Self-distillation

dog	cat	sky	
dog	1	-1	-1
cat	-1	1	-1
sky	-1	-1	1
...	1

K

Hash Function Learning

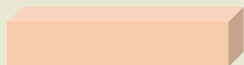


Image features

$\mathbf{P}^{(t)}$



1	1	-1	...	1	-1	-1
-1	1	1	...	-1	1	-1
1	-1	1	...	1	1	-1

$\vec{\mathbf{B}}^{(t)}$

Pairwise Similarity

Existing data	Existing data
New data	Exemplars

Lower loss

Exemplar memory at $t - 1$ round



Exemplar Memory

Data chunk at $t - 1$ round



Exemplar

New exemplar memory

