Deep Neural Feature
Extractor

$\mathbb{D}$

| 0.8 |
| -0.6 |
| -0.2 |
| 0.6 |

≥ 0

| 1 |
| 0 |
| 0 |
| 1 |

Preprocessing

Feature Extraction

Locality-Sensitive Hashing

Input Image

Preprocessed
Image x

Embedding Network M

Feature
Vector z

Hashing
Matrix B

Matrix-vector
product y

Binary
Hash H(x)

-1.57

| 1.65 | -0.61 | -1.18 | 1.87 | 0.25 |

1

Deep Neural Feature Extractor

Feature Vector

Binary Hash

$224 \times 224 \times 3$ Image

| -0.2 |
| 0.5 |
| 1.4 |
| 0.8 |
| -0.6 |
| -0.2 |
| 0.6 |

PCA Whitening

| -1.3 |
| 0.8 |
| 2.7 |
| -6.5 |
| 5.6 |
| -0.9 |
| 2.3 |

≥ 0

| 0 |
| 1 |
| 1 |
| 1 |
| 0 |
| 0 |
| 1 |