**Use Case Diagram:**

Features/Attributes

INPUT

User Registration

Sorting Algorithm

HRFLM

OUTPUT

Prediction Data

Result

**Sequence Diagram:**

User Registration

Manual feature

extraction

Data

Method

CNN

HRFLM

Prediction Data

Recognition

performance

performance is further optimized with login

corresponding classi\_er features

a top down recursive divide

to get the best result

highest subsequent probability

the percentage of instances

**Collaborative Diagram:**

Result

performance

User Registration

Features/Attributes

Linear Model

Method

Higher-resolution

Two-dimensional

Prediction Data

1: performance is further optimized

2: corresponding classifier features

3: a top down recursive divide

4: to get the best result

5: highest subsequent probability

6: the percentage of instances