

Training

Testing

Training Docs of Enrolled Users
e.g. 1-2 min Input

Testing Docs of Enrolled Users
e.g. 2-10 min Input

Noise Elimination

Word Segmentation

Sample Generation

Kinetics Feature Extraction

Noise Elimination

Word Segmentation

Sample Generation

Kinetics Feature Extraction

Data Processing & Feature Extraction at Frame Level

Component Generation

Component
Quantization

Component
Vocabulary

Component Indexing

Component Generation

Component Indexing

Feature Extraction at Component Level

1st-order Markov Representation

1st-order Markov Representation

Feature Extraction at Sample Level

SVM
Training

SVM
Model

SVM
Classification

Label: User
Identity

Classification:
User Identity

Feature Extraction at Component Level