1. This is a classification task. The result set should be the names of the suspects already in the files of the public security system.
2. Feature

|  |  |  |  |
| --- | --- | --- | --- |
|  | Attribute | Description | values |
| 1 | Skin color | The color of the suspect's skin | int[3] : Ranges 0-255 |
| 2 | Iris color | The color of the suspect's iris | int[3] : Ranges 0-255 |
| 3 | Hair color | The color of the suspect's hair | int[3] : Ranges 0-255 |
| 4 | Hair length | The length of the suspect’s hair | Int : Ranges 0-10 |
| 5 | Aspect ratio | The aspect ratio of the suspect's face(Aspect ratio = length/ width) | Float |
| 6 | beard | Does that person have a beard | Bool |
| 7 | glasses | Does that person wear glasses | Bool |
| 8 | Eye position | The position of the eyes relative to the center of the face | Int[2] |
| 9 | Eye size | Relative size of eyes | Int : Ranges 0-10 |
| 10 | Binocular distance | The distance between two eyes | Int : Ranges 0-10 |
| 11 | Nose position | The position of the nose relative to the center of the face | Int[2] |
| 12 | Mouth position | The position of the mouth relative to the center of the face | Int[2] |
| 13 | Ear position | The position of the ear relative to the center of the face | Int[2] |
| 14 | Eyebrow position | The position of the eyebrow relative to the center of the face | Int[2] |

First, feature extraction is performed on the photos of criminals in the database, and these features are used to train the network.

Then process some street pictures, and extract the corresponding features, and input them into the trained network for recognition.