Read the source Image and Cascade classifier parameters

Step 1: Nearest Neighbor

Image downscaling factor → 1.2

Detection window → 25 X 25 Image / Scaling Factor >= 25

Step 2: Integral Image

Compute sum of pixels from $[0,0] \rightarrow [x,y]$

Compute sum of squares of pixels from $[0,0] \rightarrow [x,y]$

Step 3: Set Image for HAAR Detection

Compute the image co-ordinates for each HAAR feature

Step 4: Run Cascade Classifier

Shift the detection window

Integral sum < threshold for a stage Skip this

Skip this window for further stages

Image with detected Faces

Group rectangles

Draw rectangles around the faces

Integral sum > threshold all stages
Face detected, store the co-

ordinates