

Fall-2018-ECE-66100-001: about the Viola and Jones face detector

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polarity when the images above the threshold are declared as face images and those below the threshold as non-face images. And we have another polarity when the images below the threshold are declared as face images and those above the threshold as non-face images. For the feature shown above, we choose that threshold θ and that polarity p which yields the lowest misclassification rate. We can now characterize the detection power of this feature by the triple (f, θ, p) where f is a symbolic name for the feature, θ the decision threshold that yielded the lowest misclassification error, and p the polarity.

We repeat the steps described above for each of the 160,000 features. At each iteration of the AdaBoost loop, we choose the triple (f, θ, p) which gives us the best misclassification rate.

Avi