Haorui Chen - 10407315 – cwk5 – Model-based vision

1. Viola-Jones algorithm

A majority of application still focus on its original usage-detecting faces or its parts and some researches focus on accelerating it on hardware like GPU or FPGA, yet it is still used for other purposes, like [1] and [2].

1. ACMs

From the result of google scholar, most papers on the model focuses on applying it to image segmentation. Among these, application in medical imaging has an unignorable part, like [3] and [4]

1. Eigenfaces

Most relevant researches still stop in the theoretical field of face recognition and few discussions goes into the application level. Perhaps that many applications actually used it yet those results are not worthy to be published. Some application goes to the field of security, like [5], where face recognition is vastly used. Here a blog [6] discusses how to restore the actual face from low resolution image, making itself like a toy project but may give some hint on doing identification under low resolution circumstances.

1. SSMs

It is a technique widely used in medical modeling, and examples are [7], [8]. Relevant applications on GitHub are also closely related to medicine, like [9] and [10].

1. AAMs

Direct usage of it is interpreting facial expression, as many examples have mentioned. Relevant researches continue today, like [15] and [16]. One relatively interesting application of it is estimating age of people ([11], [14]) there is also a relevant implementation [12]. However, other works on it basically focus on the implementation of the model itself rather than applying it. Medicine relevant research is again a big part, like [13].

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