

Filtering Selfie Face Image on Instagram

Instagram is one of the famous and fast-growing photos and videos sharing social media platform. There are plenty of ways to search for pictures on Instagram, but one of the most common methods of using is 'hashtag.' There are no rules for hashtag; that is why most of the time, the hashtag does not match with the uploaded image.

Scope:

The main purpose of this project will be filtering out only the selfie face images from the search result using web data extraction and human face detection technique using the Haar Cascade method [1].

Image Processing Technique:

1. **RGB to Grayscale** (it is easy to detect a face in Grayscale)
2. **Filters/Image manipulation** (resizing, contrast stretching)
3. **Edge detection**
4. **Smooth filtering**
5. **Segmentation** – Partitioning image into sub-regions (So that the classifier can identify the object and faces in the picture)
6. **Pattern detection and classification:** Haar-Like features algorithm, which is proposed by Viola and Jones for face detection

References:

- [1] A. Priadana and M. Habibi, "Face Detection using Haar Cascades to Filter Selfie Face Image on Instagram," in *2019 International Conference of Artificial Intelligence and Information Technology (ICAIIIT)*, Yogyakarta, Indonesia, 2019.

<https://ieeexplore.ieee.org/abstract/document/8834526>

- [2] OpenCV: Cascade Classifier

https://docs.opencv.org/3.4/db/d28/tutorial_cascade_classifier.html