



Image Manipulation And Retrieval

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INTRODUCTION

Here we will be discussing about the image transformation and its retrieval. **Image Manipulation** refers to the act of transforming images to arrive at the desired output. Through the art of photo manipulation, you are able to transcend your image into a true piece of art. Whereas, image manipulation can be done through the use of various image editing tools or software.

Image Retrieval is a computer vision task that involves searching for images in a large database that are similar to a given query image. The goal of image retrieval is to enable users to find images that match their interests or needs, based on visual similarity or other criteria.

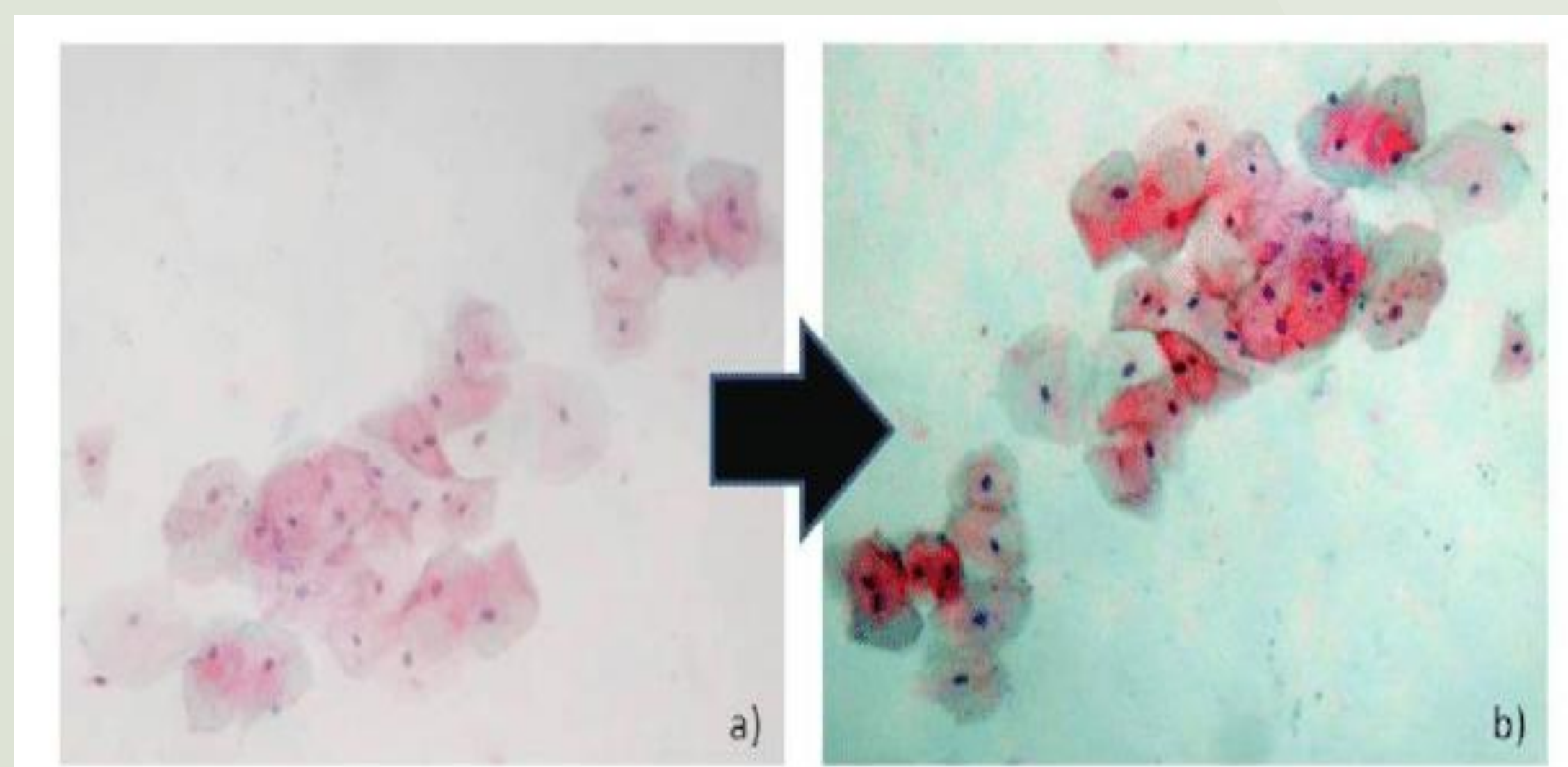


Figure 1 : Original image VS manipulated image of smear[2]

OBJECTIVES

- The main objective is to understand how image manipulation is being done.
- What are the various ways to manipulate the image.
- What are the advantages/disadvantages of image manipulation?
- What is image retrieval?
- To understand How we can retrieve our original image.
- Finding out fake and original image.

IMAGE MANIPULATION METHODS

1. Image Rendering
2. Create a shadow
3. Proportion
4. Texture Application
5. Stock Image Selection
6. Color Combination
7. Emphasis on the smallest details
8. Image Combination
9. C4D Applications
10. Enhancing a Stock Photo

Various techniques of image retrieval :

1. Text based
2. Content based
3. Multi modal fusion
4. Semantic based
5. Relevance feedback

FINDING OUT FAKE OR REAL IMAGE

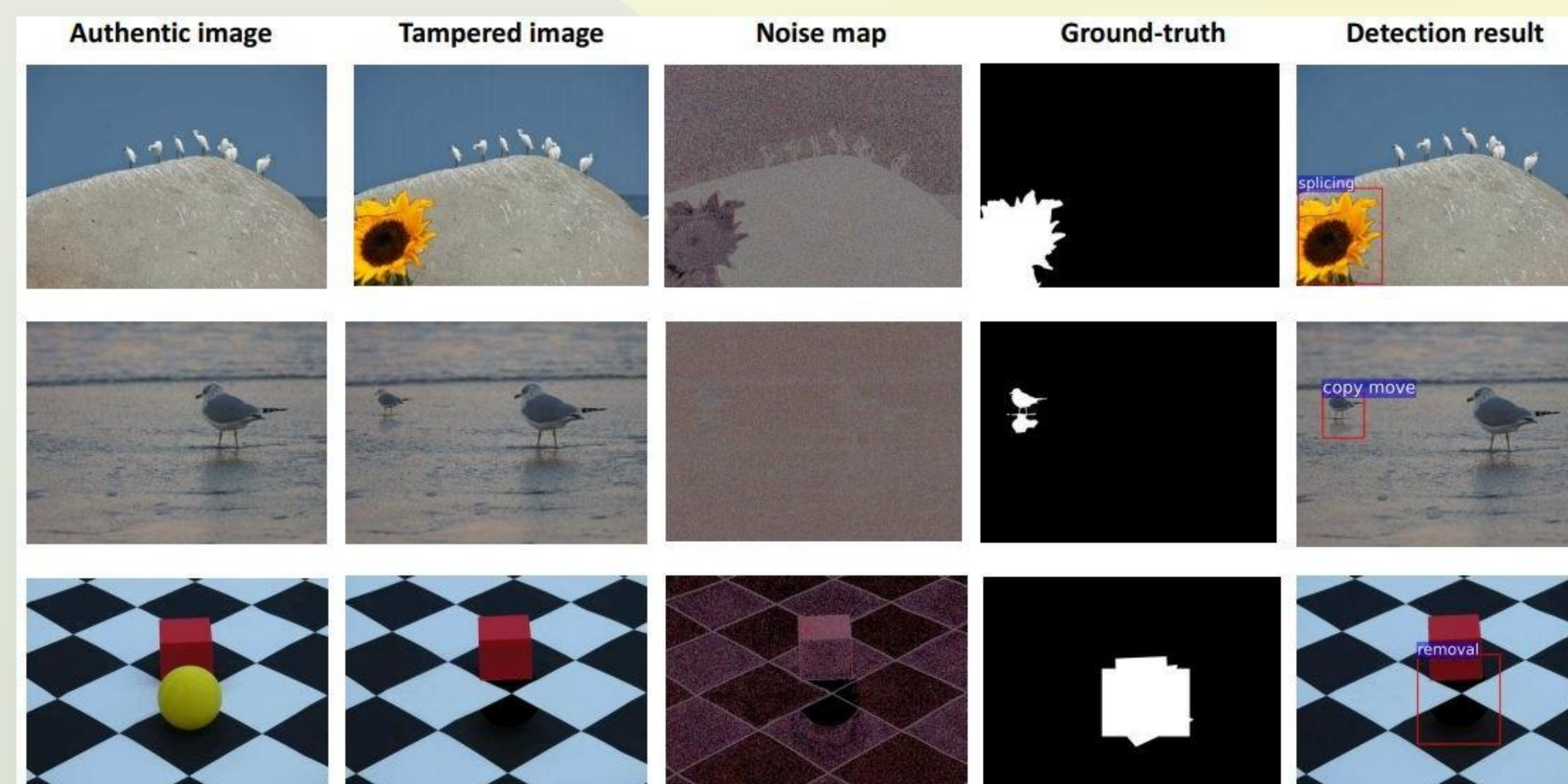


Figure 3. Qualitative results for multi-class image manipulation detection [3]

CONCLUSIONS

- With the increasing demands of multimedia applications over the Internet, the importance of image manipulation and retrieval has also increased. In this research study, techniques that have used the relevance feedback schemes to improve the performance as well as accuracy of the process are discussed.
- All these techniques have their own advantages as well as certain limitations. In other words, there is not a single technique that fits best in all sorts of user's requirements; therefore, the doors are still open to keep inventing new methodologies according to the requirements of image manipulation and retrieval applications.

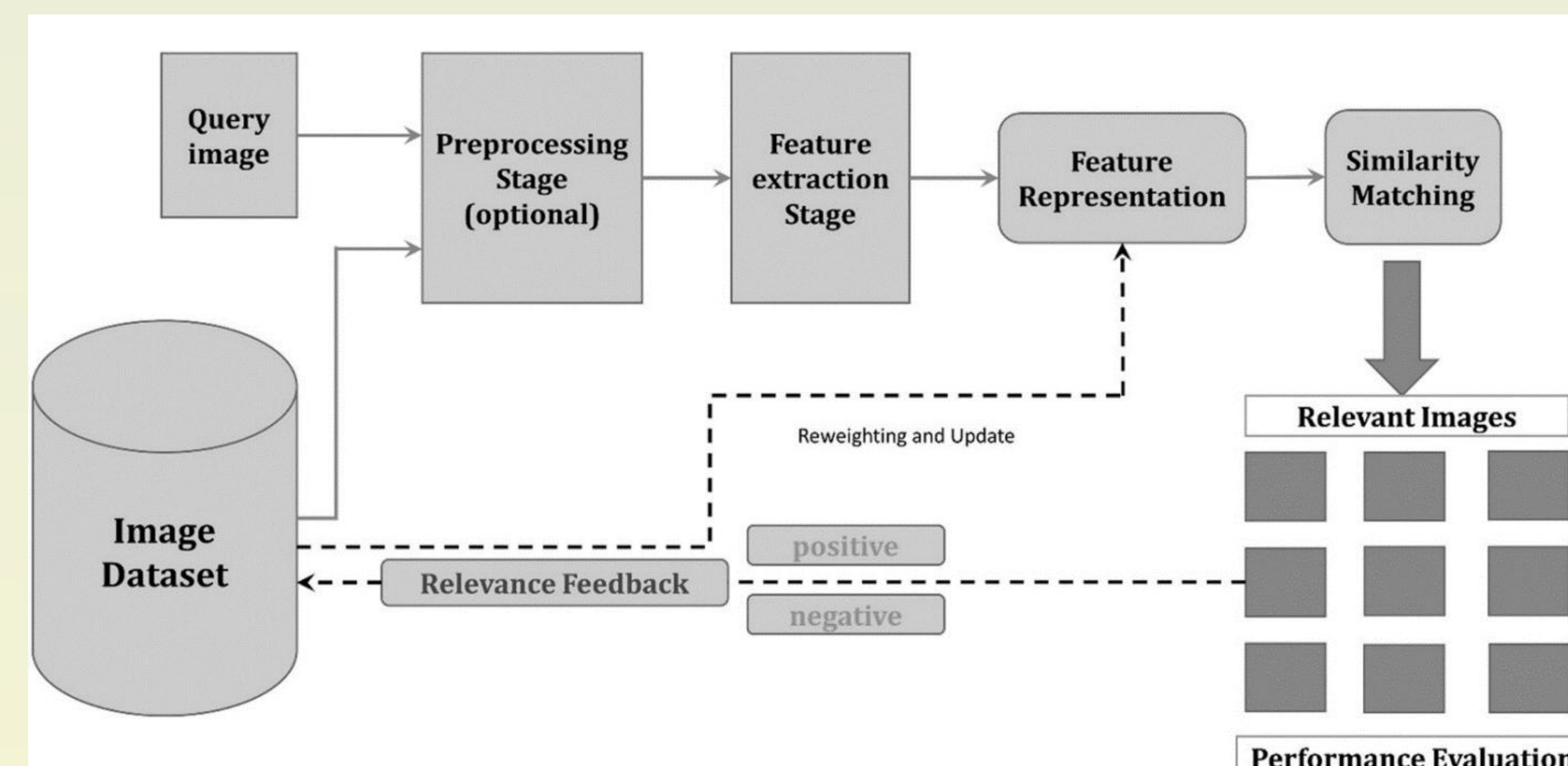


Figure 2. General framework of the CBIR system.[1]

RESULTS

1. We can transform an image or manipulate or perform certain operations on it in order to obtain specific models or to extract useful information from the image.
2. We can retrieve the original image to see what operations are done on it.

REFERENCES

- 1) Ibtihal M. Hameed, Sadiq H. Abdulhussain & Basheera M. Mahmmod | (2021) Content-based image retrieval: A review of recent trends, Cogent Engineering, 8:1, 1927469, DOI: 10.1080/23311916.2021.1927469
- 2) K. Shubhankar Reddy and K. Sreedhar B.E. Student, Information Technology, CBIT, Hyderabad, India 1 Assistant Professor, Department of Electronics and Communication Engineering, SREC, Warangal, India
- 3) Learning Rich Features for Image Manipulation Detection Peng Zhou¹ Xintong Han¹ Vlad I. Morariu² * Larry S. Davis¹ ¹University of Maryland, College Park ²Adobe Research

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