



COLOR BALANCE AND FUSION FOR UNDERWATER IMAGE ENHANCEMENT

GUIDE

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INTRODUCTION

Introducing an effective technique to enhance the images captured underwater and degraded due to the medium scattering and absorption. It builds on the blending of two images that are directly derived from a color compensated and white-balanced version of the original degraded image. The two images to fusion, as well as their associated weight maps, are defined to promote the transfer of edges and color contrast to the output image.



TECHNIQUES USED

- ✓ **WHITE BALANCING**
IMAGE FUSION
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WHITE BALANCING

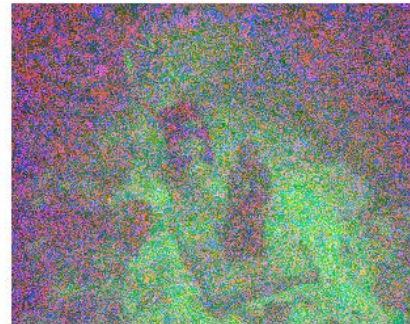
- ▶ White-balancing aims at improving the image aspect, primarily by removing the undesired color castings due to various illumination or medium attenuation properties.
- ▶ Achieved by using Color correction and Gray World Algorithm

SCREENSHOT

Input Image



Color Corrected Image



White Balanced Image

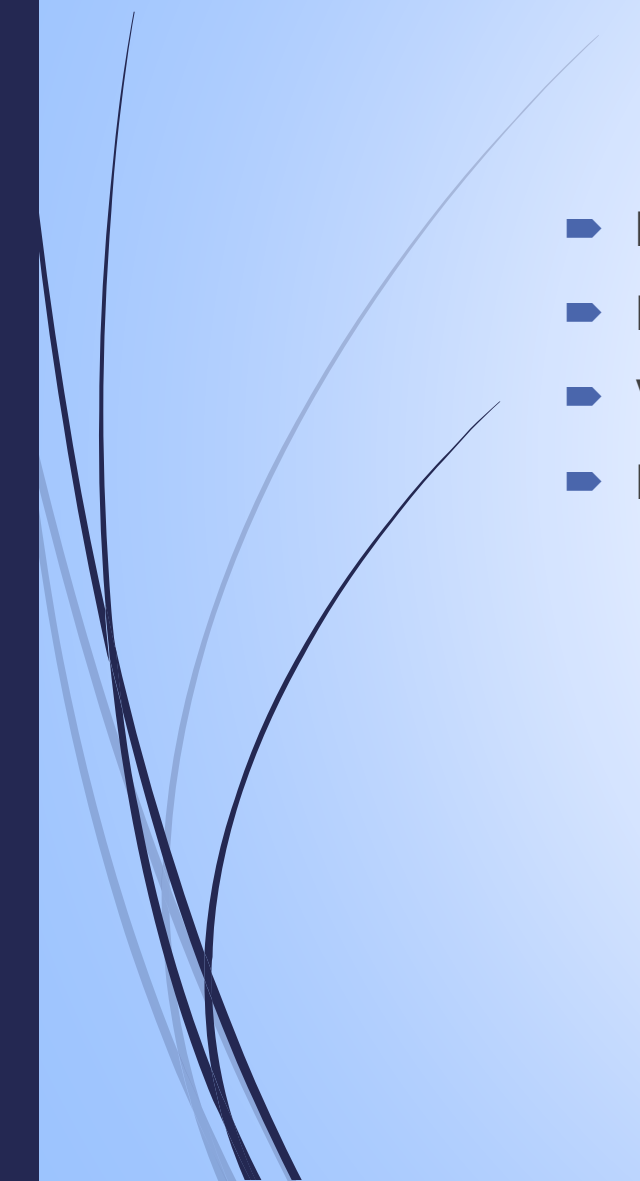


TOOLS

- Language : Python
- IDE : PyCharm
- Platform : Windows



FEATURES OF PYCHARM

- **Intelligent Coding Assistance**
 - **Debugging, Testing and Profiling**
 - **VCS, Deployment and Remote Development**
 - **Database tools**
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THANK YOU