

Land of Image Enhancement

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Outline

2

- Contrast & Brightness Adjustment
- Noise Reduction
- Sharpening
- Color Correction
- HDR (High Dynamic Range) Enhancement
- Deblurring
- Exposure

Contrast & Brightness Adjustment

Original Photo



- Improves the overall balance of light and dark areas
- Helps recover details in overexposed or underexposed images

Edited Photo



Noise Reduction

Original Photo



- Reduces noise (graininess) in low-light or high-ISO images
- Helps with clarity in night shots or compressed images

Edited Photo



Sharpening

Original Photo



- Enhances edges and details to make an image clearer
- Used for blurry or slightly out-of-focus images

Edited Photo



Color Correction

Original Photo



- Adjusts white balance, saturation, and hue to fix color inaccuracies
- Common in fixing images with color casts (e.g., too blue, too yellow)

Edited Photo



HDR (High Dynamic Range)

Original Photo



- Merges multiple exposures to balance highlights and shadows
- Helps recover details in both bright and dark areas

Edited Photo



Deblurring

Original Photo



- Reduces motion blur and out-of-focus blurriness
- Improves readability in shaky or fast-moving shots

Edited Photo



Exposure

Original Photo



- Amount of light captured by the image
- Determines how much detail is visible in an image, affecting overall image quality

Edited Photo



Summary

Image enhancement techniques improve visual quality and aid in object recognition, feature extraction, and automated processing. These techniques are widely used in medical imaging, surveillance, autonomous vehicles, and photography.

