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CPU processes

CPU memory

GPU memory

GPU processes

- Image capture
- Memory management

RGB input image

Contrast enhancement

- Coarse-to-fine control
- Histogram equalization

V Global histogram

Look-up table

HSV image

V sub-histograms

- RGB2HSV conversion

- Sub-histograms combination

- Look-up-table substitution

Retina-like processing

- Weighting factors calculation
- Memory management

Weighting factors

- 1D convolutions

- Linear combinations

Retina output

- Enhanced Brightness channel computations

Enhanced Brightness channel

- HSV 2 RGB conversion

Output image

- Final Image visualization