CLO0012

Nanopublication — Computational Image Analysis - CLO0012

by Caroline Lopez · Luco 132° - variation 1 · 2026

Claim 1: Computational Image Analysis - CLO0012

> K-means clustering analysis [3] (10 colors) performed on artwork Luco [1] 132° - variation 1 (CLO0012) [2] by Caroline Lopez [2] on 2026-03-06. Documentation includes: color families, texture roughness, brightness distribution, spatial coherence.

CONTEXT

Analysis performed according to MMIDS-CMP-2025 [3] includes four metric categories: (1) Color distribution via k-means (10 colors), (2) Texture analysis using Haralick features, (3) Brightness and contrast measurements, (4) Spatial pattern characterization. Source image [5]: 2046x2046 pixels. Analysis date: 2026-03-06.

COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		C8CBDD	27.3	blue-violet	lightgray
2		C2C3D5	20.4	violet	lightsteelblue
3		CFD2E5	14.3	violet	lightgrey
4		B8B8CC	14.2	violet	silver
5		ADAEC3	11.9	violet	steel gray
6		DAE8F3	6.8	blue	white
7		CB4743	1.9	red-orange	indianred
8		D45855	1.6	red-orange	tomato
9		A9565C	0.9	red-orange	burnt sienna
10		BC868D	0.6	red	rosybrown

Color Families:

Family	%
violet	60.8
blue-violet	27.3
blue	6.8
red-orange	4.5
red	0.6

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.088
Mean Local Roughness	0.012
Roughness Uniformity	0.013
Edge Density	0.015
Mean Gradient Magnitude	0.082
Gradient Variance	0.019
Gradient Smoothness	0.0
Directional Coherence	0.044
Pattern Complexity	0.144
Pattern Repetition	1.0
Detail Frequency Ratio	0.629
Spatial Variation	0.046
Texture Consistency	0.217

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.767
Brightness Variance	0.088
Brightness Uniformity	0.885
Brightness Skewness	-1.958
Brightness Entropy	6.001
Rms Contrast	0.088
Michelson Contrast	0.67
Weber Contrast	0.177
Mean Local Contrast	0.011
Contrast Uniformity	0.0
Dynamic Range	0.78
Effective Dynamic Range	0.247
Shadow Percentage	0.043
Midtone Percentage	5.475
Highlight Percentage	94.482
Shadow Clipping	0.0
Highlight Clipping	0.0
Tonal Balance	0.0
Fine Contrast	0.007
Medium Contrast	0.014
Coarse Contrast	0.019
Multiscale Contrast Ratio	0.361
Edge Contrast	0.082
Contrast Clustering	0.783

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.752
Color Clustering	0.0
Color Transition Smoothness	0.799
Transition Uniformity	0.885
Sharp Transition Ratio	0.1
Transition Directionality	0.048
Mean Saturation	0.124
Saturation Variance	0.012
Low Saturation Ratio	0.953
Medium Saturation Ratio	0.045
High Saturation Ratio	0.002
Saturation Clustering	1.0

Metric	Value
Hue Concentration	0.997
Complementary Balance	0.0
Analogous Dominance	1.0
Temperature Bias	1.0

Methodology

This analysis employs standardized computational methods for objective image characterization. Color extraction uses k-means clustering algorithm. Texture analysis applies Haralick feature extraction. Brightness metrics include mean, variance, and distribution analysis. Spatial patterns are characterized through coherence and clustering measurements. All methods are deterministic and reproducible. Analysis performed by Multimodal Institute's computational imaging systems.

REFERENCES

[1] Caroline Lopez (2026). Luco 132° - variation 1 — Catalog raisonné. https://arnaudquercy.art/en/catalogue-raisonne/CLO0012.html

[2] Lopez, C. (2026). Luco 132° - variation 1 - Gallery. https://artquamanima.com/en/artworks/2026/02/luco-132-variation-1_1yxd.html

[3] Quercy, A. (2025). Computational Image Analysis Standard - MMIDS-CMP-2025 https://multimodal.institute/en/publications/2025/10/mmids-cmp-2025-computational-image-analysis-standard-dg1.html

EPISTEMIC PROFILE

Claim type	computational analysis
Voice	third person
Epistemic status	empirical measurement
Methodology	computational analysis
Certainty	high

CHECKSUM (SHA-256)

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