AQC0908

Nanopublication — Computational Image Analysis - AQC0908

by Arnaud Quercy · C Major - Research on Harmony - Variations 19 · 2025

Claim 1: Computational Image Analysis - AQC0908

> K-means clustering analysis [3] (10 colors) performed on artwork C Major [1] - Research on Harmony - Variations 19 (AQC0908) [2] by Arnaud Quercy [2] on 2025-12-11. 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]: 2062x2062 pixels. Analysis date: 2025-12-11.

COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		E74308	26.7	orange	orangered
2		B98370	15.5	orange	rosybrown
3		F05114	14.9	orange	chocolate
4		CA917E	13.5	orange	darksalmon
5		4F423C	10.1	orange	darkslategray
6		E9E8DC	6.7	yellow	white
7		BA453F	4.2	red-orange	burnt sienna
8		D44E58	4.0	red-orange	indianred
9		EFAEAD	3.6	red-orange	lightpink
10		47130F	0.8	red-orange	very dark red
11		19080D	0.3	red	black [Accent]
12		BAB2A9	0.3	yellow-orange	steel gray [Accent]

Color Families:

Family	%
orange	80.7
red-orange	12.7
yellow	6.7
red	0.3
yellow-orange	0.3

Accent Colors:

Hex	Family	Name	Chroma
19080D	red	black	8.0
BAB2A9	yellow-orange	steel gray	6.1

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.158
Mean Local Roughness	0.015
Roughness Uniformity	0.018
Edge Density	0.03
Mean Gradient Magnitude	0.121
Gradient Variance	0.03
Gradient Smoothness	0.0
Directional Coherence	0.007
Pattern Complexity	0.121
Pattern Repetition	1.0
Detail Frequency Ratio	0.638
Spatial Variation	0.088
Texture Consistency	0.27

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.513
Brightness Variance	0.158
Brightness Uniformity	0.691
Brightness Skewness	0.74
Brightness Entropy	6.833
Rms Contrast	0.158
Michelson Contrast	1.0
Weber Contrast	0.584
Mean Local Contrast	0.016
Contrast Uniformity	0.0
Dynamic Range	1.0
Effective Dynamic Range	0.616
Shadow Percentage	10.675
Midtone Percentage	77.615
Highlight Percentage	11.709
Shadow Clipping	0.001
Highlight Clipping	0.001
Tonal Balance	0.0
Fine Contrast	0.008
Medium Contrast	0.02
Coarse Contrast	0.029
Multiscale Contrast Ratio	0.273
Edge Contrast	0.121
Contrast Clustering	0.73

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.783
Color Clustering	0.477
Color Transition Smoothness	0.708
Transition Uniformity	0.8
Sharp Transition Ratio	0.1

Metric	Value
Transition Directionality	0.015
Mean Saturation	0.603
Saturation Variance	0.103
Low Saturation Ratio	0.184
Medium Saturation Ratio	0.383
High Saturation Ratio	0.434
Saturation Clustering	0.999
Hue Concentration	0.994
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] Arnaud Quercy (2025). C Major - Research on Harmony - Variations 19 — Catalog raisonné. https://arnaudquercy.art/en/catalogue-raisonne/AQC0908.html

[2] Quercy, A. (2025). Untitled - Gallery. https://artquamanima.com/en/artworks/2025/11/c-major-research-on-harmony-variations-19_id8.html

[3] Quercy, A. (2025). Computational Image Analysis Standard - MMIDS-CMP-2025 https://multimodal.institute/en/publications/2025/11/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)

a27434194b638bf5512c0172e8847229e2733d95d38eb978df63cf-d136c7f555

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