Nanopublication — Computational Image Analysis - AQC0555

by Arnaud Quercy · C Major9 - Research on Harmony - Variation 7 · 2024

Claim 1: Computational Image Analysis - AQC0555

> Computational image analysis [3] of artwork C Major9 -
> Research [1] on Harmony - Variation 7 (AQC0555) [2] by
> Arnaud Quercy [2] using k-means clustering method with 10
> color extraction parameters. Analysis includes color distribu-
> tion, texture metrics, brightness/contrast measurements, and
> spatial pattern characterization. Analysis completed on
> 2026-02-04.

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]: 3024x4032 pixels. Analysis date: 2026-02-04.

COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		D66A3A	23.9	orange	chocolate
2		C1592A	15.2	orange	burnt sienna
3		EB7C49	15.1	orange	coral
4		140F15	13.7	black	black
5		C89B86	9.6	orange	rosybrown
6		302528	7.0	red	very dark gray
7		D7B39F	6.5	orange	tan
8		AF856E	3.8	orange	gray
9		E5D7C7	2.7	yellow-orange	lightgray
10		624B43	2.4	orange	dark brown
11		732817	0.3	red-orange	russet [Accent]

Color Families:

Family	%
orange	76.5
black	13.7
red	7.0
yellow-orange	2.7
red-orange	0.3

Accent Colors:

Hex	Family	Name	Chroma
732817	red-orange	russet	42.5

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.214
Mean Local Roughness	0.015
Roughness Uniformity	0.014
Edge Density	0.072
Mean Gradient Magnitude	0.156
Gradient Variance	0.027
Gradient Smoothness	0.0
Directional Coherence	0.017
Pattern Complexity	0.114
Pattern Repetition	1.0
Detail Frequency Ratio	0.6
Spatial Variation	0.178
Texture Consistency	0.341

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.468
Brightness Variance	0.214
Brightness Uniformity	0.544
Brightness Skewness	-0.712
Brightness Entropy	7.269
Rms Contrast	0.214
Michelson Contrast	1.0
Weber Contrast	0.875
Mean Local Contrast	0.018
Contrast Uniformity	0.174
Dynamic Range	1.0
Effective Dynamic Range	0.69
Shadow Percentage	22.2
Midtone Percentage	64.403
Highlight Percentage	13.398
Shadow Clipping	0.014
Highlight Clipping	0.002
Tonal Balance	0.0
Fine Contrast	0.008
Medium Contrast	0.022
Coarse Contrast	0.043
Multiscale Contrast Ratio	0.177
Edge Contrast	0.156
Contrast Clustering	0.659

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.733
Color Clustering	0.622
Color Transition Smoothness	0.603
Transition Uniformity	0.807
Sharp Transition Ratio	0.1

Metric	Value
Transition Directionality	0.018
Mean Saturation	0.546
Saturation Variance	0.053
Low Saturation Ratio	0.171
Medium Saturation Ratio	0.426
High Saturation Ratio	0.404
Saturation Clustering	0.999
Hue Concentration	0.849
Complementary Balance	0.002
Analogous Dominance	0.919
Temperature Bias	0.877

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 (2024). C Major9 - Research on Harmony - Variation 7 — Catalog raisonné. https://arnaudquercy.art/en/catalogue-raisonne/AQC0555.html

[2] Quercy, A. (2025). Untitled - Gallery. https://artquamanima.com/en/artworks/2024/01/c-major9-research-on-harmony-variation-7_682.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)

`edf72cf65a4ef270d8b839316800c6f4237e-b0ba158b35e6487548961ba8846d`

Artist	Arnaud Quercy
Date	2024
Collection	Synesthetic Explorations
Certificate	20240306-0051
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