

Nanopublication — Computational Image Analysis - AQC0758

by Arnaud Quercy · F Major - Research on Harmony - Variation 4 · 2024

Claim 1: Computational Image Analysis - AQC0758

K-means clustering analysis [3] (10 colors) performed on artwork F Major [1] - Research on Harmony - Variation 4 (AQC0758) [2] by Arnaud Quercy [2] on 2026-02-04. 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]: 2953x3938 pixels. Analysis date: 2026-02-04.

COLOR ANALYSIS

Rank	Color Hex	%	Family	Name
1	9D2637	14.8	red-orange	brown
2	C88F74	13.8	orange	rosybrown
3	BEB5A6	13.3	yellow-orange	steel gray
4	DFB693	13.2	orange	burlywood
5	A64958	11.3	red	indianred
6	803926	10.1	red-orange	russet
7	E4CBC3	6.4	orange	lightgray
8	1E1720	6.4	red-violet	black
9	AC7C2E	6.1	yellow-orange	peru
10	373640	4.5	violet	dusty mauve

Color Families:

Family	%
orange	33.4
red-orange	24.9
yellow-orange	19.4
red	11.3
red-violet	6.4
violet	4.5

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.223
Mean Local Roughness	0.022
Roughness Uniformity	0.016
Edge Density	0.151
Mean Gradient Magnitude	0.202
Gradient Variance	0.042
Gradient Smoothness	0.0
Directional Coherence	0.007

Metric	Value
Pattern Complexity	0.112
Pattern Repetition	1.0
Detail Frequency Ratio	0.607
Spatial Variation	0.156
Texture Consistency	0.581

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.5
Brightness Variance	0.223
Brightness Uniformity	0.555
Brightness Skewness	-0.129
Brightness Entropy	7.555
Rms Contrast	0.223
Michelson Contrast	1.0
Weber Contrast	0.717
Mean Local Contrast	0.026
Contrast Uniformity	0.307
Dynamic Range	1.0
Effective Dynamic Range	0.671
Shadow Percentage	30.028
Midtone Percentage	36.101
Highlight Percentage	33.871
Shadow Clipping	0.005
Highlight Clipping	0.0
Tonal Balance	0.24
Fine Contrast	0.012
Medium Contrast	0.032
Coarse Contrast	0.051
Multiscale Contrast Ratio	0.228
Edge Contrast	0.202
Contrast Clustering	0.419

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.714
Color Clustering	0.667
Color Transition Smoothness	0.492
Transition Uniformity	0.714
Sharp Transition Ratio	0.1
Transition Directionality	0.008
Mean Saturation	0.459
Saturation Variance	0.06
Low Saturation Ratio	0.292
Medium Saturation Ratio	0.478
High Saturation Ratio	0.23

Metric	Value
Saturation Clustering	0.999
Hue Concentration	0.835
Complementary Balance	0.006
Analogous Dominance	0.92
Temperature Bias	0.903

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). F Major - Research on Harmony - Variation 4 — Catalog raisonné. <https://arnaudquercy.art/en/catalogue-raisonne/AQC0758.html>
- [2] Quercy, A. (2025). Untitled - Gallery. https://artquamanima.com/en/artworks/2024/01/f-major-research-on-harmony-variation-4_8f0.html

[3] Quercy, A. (2025). Computational Image Analysis Standard - MMIDS-CMP-2025 h
<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)

b43414b0604d3727e820866f632a2d0e5a2dabfe0eeb5d79d-ca07e74f712762b

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