AQC0746

Nanopublication — Computational Image Analysis - AQC0746

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

Claim 1: Computational Image Analysis - AQC0746

> K-means clustering analysis [3] (10 colors) performed on artwork C Major [1] - Research on Harmony - Variation 4 (AQC0746) [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]: 3024x4032 pixels. Analysis date: 2026-02-04.

COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		26232B	17.2	violet	very dark gray
2		A6222A	13.4	red-orange	brown
3		D64C2C	13.1	red-orange	chocolate
4		C4BBB0	12.5	yellow-orange	silver
5		B24435	10.5	red-orange	burnt sienna
6		E9722A	9.9	orange	tomato
7		E6CDC9	8.1	red-orange	lightgray
8		A8A298	7.1	yellow-orange	steel gray
9		474852	5.6	violet	dusty mauve
10		D79F74	2.6	orange	darksalmon
11		1F030B	0.3	red	very dark gray [Accent]

Color Families:

Family	%
red-orange	45.1
violet	22.8
yellow-orange	19.6
orange	12.5
red	0.3

Accent Colors:

Hex	Family	Name	Chroma
1F030B	red	very dark gray	11.0

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.224
Mean Local Roughness	0.023
Roughness Uniformity	0.019
Edge Density	0.139
Mean Gradient Magnitude	0.214
Gradient Variance	0.056
Gradient Smoothness	0.0
Directional Coherence	0.008
Pattern Complexity	0.118
Pattern Repetition	1.0
Detail Frequency Ratio	0.606
Spatial Variation	0.15
Texture Consistency	0.643

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.459
Brightness Variance	0.224
Brightness Uniformity	0.512
Brightness Skewness	0.146
Brightness Entropy	7.705
Rms Contrast	0.224
Michelson Contrast	1.0
Weber Contrast	0.792
Mean Local Contrast	0.028
Contrast Uniformity	0.211
Dynamic Range	1.0
Effective Dynamic Range	0.686
Shadow Percentage	32.975
Midtone Percentage	42.202
Highlight Percentage	24.822
Shadow Clipping	0.007
Highlight Clipping	0.002
Tonal Balance	0.425
Fine Contrast	0.011
Medium Contrast	0.034
Coarse Contrast	0.055
Multiscale Contrast Ratio	0.207
Edge Contrast	0.214
Contrast Clustering	0.357

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.722
Color Clustering	0.622
Color Transition Smoothness	0.458
Transition Uniformity	0.604
Sharp Transition Ratio	0.1
Transition Directionality	0.01
Mean Saturation	0.475

Metric	Value
Saturation Variance	0.107
Low Saturation Ratio	0.445
Medium Saturation Ratio	0.128
High Saturation Ratio	0.427
Saturation Clustering	0.999
Hue Concentration	0.736
Complementary Balance	0.007
Analogous Dominance	0.854
Temperature Bias	0.74

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 Major - Research on Harmony - Variation 4 — Catalog raisonné. https://arnaudquercy.art/en/catalogue-raisonne/AQC0746.html

[2] Quercy, A. (2025). Untitled - Gallery. https://artquamanima.com/en/artworks/2024/01/c-major-research-on-harmony-variation-4_8ac.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)

b217ce01b1a3525224d6d1b0930dc4417ff8909754d-d71482cb504a6f9b1116e

Artist	Arnaud Quercy
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