AQC0521

Nanopublication — Computational Image Analysis - AQC0521

by Arnaud Quercy · D Major9 - Research on Harmony - Variation 1 · 2024

Claim 1: Computational Image Analysis - AQC0521

> K-means clustering analysis [3] (10 colors) performed on artwork D Major9 - Research [1] on Harmony - Variation 1 (AQC0521) [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]: 2015x2686 pixels. Analysis date: 2026-02-04.

COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		E7E5E0	25.9	white	white
2		D9D6D0	15.9	white	lightgray
3		B58F49	9.7	yellow-orange	peru
4		777674	9.6	gray	gray
5		C6A678	9.3	yellow-orange	ochre
6		93928F	8.7	gray	grey
7		9B6A3E	6.4	orange	burnt sienna
8		BFBAB1	5.5	yellow-orange	silver
9		AC8969	4.9	orange	rosybrown
10		52504F	3.9	gray	darkslategray
11		3B2D2A	0.3	red-orange	darkslategray [Accent]

Color Families:

Family	%
white	41.9
yellow-orange	24.5
gray	22.3
orange	11.4
red-orange	0.3

Accent Colors:

Hex	Family	Name	Chroma
3B2D2A	red-orange	darkslategray	7.2

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.183
Mean Local Roughness	0.023
Roughness Uniformity	0.024
Edge Density	0.133
Mean Gradient Magnitude	0.181
Gradient Variance	0.056
Gradient Smoothness	0.0
Directional Coherence	0.009
Pattern Complexity	0.133
Pattern Repetition	1.0
Detail Frequency Ratio	0.664
Spatial Variation	0.093
Texture Consistency	0.827

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.691
Brightness Variance	0.183
Brightness Uniformity	0.736
Brightness Skewness	-0.304
Brightness Entropy	6.929
Rms Contrast	0.183
Michelson Contrast	0.969
Weber Contrast	0.506
Mean Local Contrast	0.025
Contrast Uniformity	0.0
Dynamic Range	0.984
Effective Dynamic Range	0.506
Shadow Percentage	2.222
Midtone Percentage	46.08
Highlight Percentage	51.698
Shadow Clipping	0.0
Highlight Clipping	0.001
Tonal Balance	0.0
Fine Contrast	0.013
Medium Contrast	0.03
Coarse Contrast	0.039
Multiscale Contrast Ratio	0.323
Edge Contrast	0.181
Contrast Clustering	0.173

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.749
Color Clustering	0.755
Color Transition Smoothness	0.545
Transition Uniformity	0.643
Sharp Transition Ratio	0.1
Transition Directionality	0.013
Mean Saturation	0.181

Metric	Value
Saturation Variance	0.051
Low Saturation Ratio	0.699
Medium Saturation Ratio	0.3
High Saturation Ratio	0.001
Saturation Clustering	1.0
Hue Concentration	0.993
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 (2024). D Major9 - Research on Harmony - Variation 1 — Catalog raisonné. https://arnaudquercy.art/en/catalogue-raisonne/AQC0521.html

[2] Quercy, A. (2024). D Major9 - Research on Harmony - Variation 1 - Gallery. https://artquamanima.com/en/artworks/2024/01/d-major9-research-on-harmony-variation-1_5uu.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)

06bfa651613760eed838a4d3b6048c21b4a000b88eda699e7c678778ba0b-d972

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