AQC0639

Nanopublication — Computational Image Analysis - AQC0639

by Arnaud Quercy · G Major - Research on Harmony - Variation 1 · 2024

Claim 1: Computational Image Analysis - AQC0639

> K-means clustering analysis [3] (10 colors) performed on artwork G Major [1] - Research on Harmony - Variation 1 (AQC0639) [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]: 1977x2965 pixels. Analysis date: 2026-02-04.

COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		E5730E	20.5	orange	chocolate
2		EC7E25	17.4	orange	peru
3		84C46B	15.3	yellow-green	darkseagreen
4		F58F3C	10.0	orange	coral
5		76AD57	9.1	yellow-green	yellowgreen
6		0E0F0B	8.1	black	black
7		668B41	7.0	yellow-green	olivedrab
8		98D980	4.7	yellow-green	lightgreen
9		53632B	4.1	yellow-green	dark brown
10		2F3425	3.8	yellow-green	darkslategray
11		642B1A	0.3	red-orange	russet [Accent]
12		876A3A	0.3	yellow-orange	burnt sienna [Accent]

Color Families:

Family	%
orange	47.9
yellow-green	44.0
black	8.1
red-orange	0.3
yellow-orange	0.3

Accent Colors:

Hex	Family	Name	Chroma
642B1A	red-orange	russet	33.2
876A3A	yellow-orange	burnt sienna	31.4

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.178
Mean Local Roughness	0.024
Roughness Uniformity	0.023
Edge Density	0.129
Mean Gradient Magnitude	0.196
Gradient Variance	0.059
Gradient Smoothness	0.0
Directional Coherence	0.016
Pattern Complexity	0.109
Pattern Repetition	1.0
Detail Frequency Ratio	0.634
Spatial Variation	0.109
Texture Consistency	0.509

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.524
Brightness Variance	0.178
Brightness Uniformity	0.66
Brightness Skewness	-1.575
Brightness Entropy	6.769
Rms Contrast	0.178
Michelson Contrast	1.0
Weber Contrast	0.721
Mean Local Contrast	0.026
Contrast Uniformity	0.108
Dynamic Range	1.0
Effective Dynamic Range	0.647
Shadow Percentage	13.505
Midtone Percentage	73.527
Highlight Percentage	12.967
Shadow Clipping	0.019
Highlight Clipping	0.0
Tonal Balance	0.0
Fine Contrast	0.013
Medium Contrast	0.033
Coarse Contrast	None
Multiscale Contrast Ratio	1.0
Edge Contrast	0.196
Contrast Clustering	0.491

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.736
Color Clustering	0.55
Color Transition Smoothness	0.507
Transition Uniformity	0.592
Sharp Transition Ratio	0.1

Metric	Value
Transition Directionality	0.019
Mean Saturation	0.647
Saturation Variance	0.064
Low Saturation Ratio	0.09
Medium Saturation Ratio	0.408
High Saturation Ratio	0.502
Saturation Clustering	0.998
Hue Concentration	0.775
Complementary Balance	0.019
Analogous Dominance	0.863
Temperature Bias	0.504

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). G Major - Research on Harmony - Variation 1 — Catalog raisonné. https://arnaudquercy.art/en/catalogue-raisonne/AQC0639.html

[2] Quercy, A. (2025). Untitled - Gallery. https://artquamanima.com/en/artworks/2024/01/g-major-research-on-harmony-variation-1_74q.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)

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