AQC0740

Nanopublication — Computational Image Analysis - AQC0740

by Arnaud Quercy · G Minor - Research on Harmony - Variation 4 · 2024

Claim 1: Computational Image Analysis - AQC0740

> K-means clustering analysis [3] (10 colors) performed on artwork G Minor [1] - Research on Harmony - Variation 4 (AQC0740) [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		E8941C	20.0	orange	goldenrod
2		E1B78C	18.9	orange	burlywood
3		B26447	11.8	orange	indianred
4		252228	9.7	gray	very dark gray
5		C0BAB1	8.9	yellow-orange	silver
6		9D532B	8.6	orange	burnt sienna
7		3C3C4A	7.0	violet	dusty mauve
8		B0A4D9	5.7	violet	lightsteelblue
9		58537D	4.9	violet	dusty mauve
10		C4BAEB	4.6	violet	thistle
11		340C03	0.3	red-orange	very dark red [Accent]
12		ACA269	0.3	yellow	ochre [Accent]
13		86676D	0.3	red	dimgray [Accent]

Color Families:

Family	%
orange	59.2
violet	22.2
gray	9.7
yellow-orange	8.9
red-orange	0.3
yellow	0.3
red	0.3

Accent Colors:

Hex	Family	Name	Chroma
340C03	red-orange	very dark red	23.0
ACA269	yellow	ochre	31.4
86676D	red	dimgray	13.0

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.209
Mean Local Roughness	0.023
Roughness Uniformity	0.022
Edge Density	0.1
Mean Gradient Magnitude	0.175
Gradient Variance	0.054
Gradient Smoothness	0.0
Directional Coherence	0.012
Pattern Complexity	0.123
Pattern Repetition	1.0
Detail Frequency Ratio	0.652
Spatial Variation	0.153
Texture Consistency	0.555

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.544
Brightness Variance	0.209
Brightness Uniformity	0.616
Brightness Skewness	-0.657
Brightness Entropy	7.274
Rms Contrast	0.209
Michelson Contrast	1.0
Weber Contrast	0.747
Mean Local Contrast	0.024
Contrast Uniformity	0.008
Dynamic Range	1.0
Effective Dynamic Range	0.639
Shadow Percentage	19.041
Midtone Percentage	42.454
Highlight Percentage	38.504
Shadow Clipping	0.0
Highlight Clipping	0.001
Tonal Balance	0.0
Fine Contrast	0.012
Medium Contrast	0.03
Coarse Contrast	0.04
Multiscale Contrast Ratio	0.31
Edge Contrast	0.175
Contrast Clustering	0.445

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.772
Color Clustering	0.621

Metric	Value
Color Transition Smoothness	0.547
Transition Uniformity	0.616
Sharp Transition Ratio	0.1
Transition Directionality	0.016
Mean Saturation	0.472
Saturation Variance	0.077
Low Saturation Ratio	0.329
Medium Saturation Ratio	0.404
High Saturation Ratio	0.267
Saturation Clustering	0.999
Hue Concentration	0.548
Complementary Balance	0.022
Analogous Dominance	0.744
Temperature Bias	0.64

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 Minor - Research on Harmony - Variation 4 — Catalog raisonné. https://arnaudquercy.art/en/catalogue-raisonne/AQC0740.html

[2] Quercy, A. (2025). Untitled - Gallery. https://artquamanima.com/en/artworks/2024/01/g-minor-research-on-harmony-variation-4_880.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)

744a2b2af8bb8052b05116e443ef-be46831c19a73b9649e344aa8da4c428b205

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