AQC0940

Nanopublication — Computational Image Analysis - AQC0940

by Arnaud Quercy · Gb Major - Research on Harmony - Variations 8 · 2025

Claim 1: Computational Image Analysis - AQC0940

> K-means clustering analysis [3] (10 colors) performed on artwork Gb Major [1] - Research on Harmony - Variations 8 (AQC0940) [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]: 2016x2823 pixels. Analysis date: 2026-02-04.

COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		5DE3D8	22.7	green	mediumturquoise
2		283D3C	14.0	green	darkslategray
3		8BA39E	11.5	green	darkseagreen
4		D2BEE6	10.7	violet	thistle
5		9273AF	9.7	violet	dusty mauve
6		0A0E14	9.5	black	black
7		0563B5	7.5	blue-violet	darkcyan
8		60499C	6.6	violet	darkslateblue
9		E7E6E7	4.8	white	white
10		526254	3.1	yellow-green	dimgray
11		9D7D20	0.3	yellow-orange	darkgoldenrod [Accent]
12		9BCCDA	0.3	blue-green	lightsteelblue [Accent]
13		87C0D1	0.3	blue	skyblue [Accent]
14		B687C4	0.3	red-violet	steel gray [Accent]

Color Families:

Family	%
green	48.2
violet	26.9
black	9.5
blue-violet	7.5
white	4.8
yellow-green	3.1
yellow-orange	0.3
blue-green	0.3
blue	0.3
red-violet	0.3

Accent Colors:

Hex	Family	Name	Chroma
9D7D20	yellow-orange	darkgoldenrod	52.1
9BCCDA	blue-green	lightsteelblue	17.7
87C0D1	blue	skyblue	19.8
B687C4	red-violet	steel gray	38.3

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.258
Mean Local Roughness	0.015
Roughness Uniformity	0.018
Edge Density	0.031
Mean Gradient Magnitude	0.116
Gradient Variance	0.045
Gradient Smoothness	0.0
Directional Coherence	0.012
Pattern Complexity	0.125
Pattern Repetition	1.0
Detail Frequency Ratio	0.606
Spatial Variation	0.151
Texture Consistency	0.666

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.507
Brightness Variance	0.258
Brightness Uniformity	0.492
Brightness Skewness	-0.296
Brightness Entropy	7.65
Rms Contrast	0.258
Michelson Contrast	1.0
Weber Contrast	0.814
Mean Local Contrast	0.016
Contrast Uniformity	0.0
Dynamic Range	1.0
Effective Dynamic Range	0.796
Shadow Percentage	32.123
Midtone Percentage	28.893
Highlight Percentage	38.984
Shadow Clipping	0.007
Highlight Clipping	0.001
Tonal Balance	0.299
Fine Contrast	0.009
Medium Contrast	0.02
Coarse Contrast	0.032
Multiscale Contrast Ratio	0.29
Edge Contrast	0.116

Metric	Value
Contrast Clustering	0.334

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.73
Color Clustering	0.715
Color Transition Smoothness	0.692
Transition Uniformity	0.673
Sharp Transition Ratio	0.1
Transition Directionality	0.015
Mean Saturation	0.422
Saturation Variance	0.065
Low Saturation Ratio	0.351
Medium Saturation Ratio	0.543
High Saturation Ratio	0.106
Saturation Clustering	0.999
Hue Concentration	0.749
Complementary Balance	0.017
Analogous Dominance	0.693
Temperature Bias	-0.697

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 (2025). Gb Major - Research on Harmony - Variations 8 — Catalog raisonné. https://arnaudquercy.art/en/catalogue-raisonne/AQC0940.html

[2] Quercy, A. (2025). Gb Major - Research on Harmony - Variations 8 - Gallery. https://artquamanima.com/en/artworks/2025/12/gb-major-research-on-harmony-variations-8_1i2y.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)

3ce07e12a037bee07cbc880b7ed66f482a107253c9875d02a4bbeca2f5cbc422

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