AQC1081 | NAN-COL000644

Nanopublication — Computational Image Analysis - AQC1081

by Arnaud Quercy · Watercolor Study in G Minor7 No. 1 · 2026

CLAIM 1: COMPUTATIONAL IMAGE ANALYSIS - AQC1081

K-means clustering (10 colors) performed on artwork Watercolor Study in G Minor7 No. 1 (AQC1081) [1] by Arnaud Quercy [2] on 2026-07-13, according to IDS-CMP-2025 [3]. Documentation includes: color families, texture roughness, brightness distribution, spatial coherence.

CONTEXT

Analysis performed according to IDS-CMP-2025 [3] includes four metric categories: (a) Color distribution via k-means (10 colors), (b) Texture analysis using Haralick features, (c) Brightness and contrast measurements, (d) Spatial pattern characterization. Source image: 1841x2761 pixels. Analysis date: 2026-07-13.

A) COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		95778F	22.0	red-violet	dusty mauve
2		82667D	15.0	red-violet	dusty mauve
3		A78A9D	13.7	red-violet	rosybrown
4		60433D	13.6	red-orange	dark brown
5		833E1F	9.9	orange	russet
6		4D332D	9.6	red-orange	darkslategray
7		665367	6.2	red-violet	dusty mauve
8		88513E	4.9	orange	burnt sienna
9		682407	2.6	orange	maroon
10		0D0506	2.5	black	black
11		C3AEB1	0.3	red	silver [Accent]

Color Families:

Family	%
red-violet	56.8
red-orange	23.2
orange	17.4
black	2.5
red	0.3

Accent Colors:

Hex	Family	Name	Chroma
C3AEB1	red	silver	8.1

B) TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.135
Mean Local Roughness	0.015
Roughness Uniformity	0.011
Edge Density	0.014
Mean Gradient Magnitude	0.115
Gradient Variance	0.021
Gradient Smoothness	0.0
Directional Coherence	0.004
Pattern Complexity	0.131
Pattern Repetition	1.0
Detail Frequency Ratio	0.61
Spatial Variation	0.087
Texture Consistency	0.697

C) BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.401
Brightness Variance	0.135
Brightness Uniformity	0.664
Brightness Skewness	-0.388
Brightness Entropy	6.919
Rms Contrast	0.135
Michelson Contrast	1.0
Weber Contrast	0.566
Mean Local Contrast	0.016
Contrast Uniformity	0.23
Dynamic Range	0.859
Effective Dynamic Range	0.388
Shadow Percentage	35.919
Midtone Percentage	63.449
Highlight Percentage	0.632
Shadow Clipping	0.024
Highlight Clipping	0.0
Tonal Balance	0.0
Fine Contrast	0.01
Medium Contrast	0.019
Coarse Contrast	0.029
Multiscale Contrast Ratio	0.338
Edge Contrast	0.115
Contrast Clustering	0.303

D) SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.738
Color Clustering	0.677
Color Transition Smoothness	0.69
Transition Uniformity	0.842
Sharp Transition Ratio	0.1
Transition Directionality	0.004
Mean Saturation	0.349
Saturation Variance	0.05
Low Saturation Ratio	0.659
Medium Saturation Ratio	0.215
High Saturation Ratio	0.126
Saturation Clustering	0.998
Hue Concentration	0.83
Complementary Balance	0.002
Analogous Dominance	0.708
Temperature Bias	0.901

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 Ideamorphic Studies' computational imaging systems.

REFERENCES

[1] Quercy, A. (2026). Watercolor Study in G Minor7 No. 1 – Catalogue Raisonné. https://arnaudquercy.art/en/catalogue-raisonne/AQC1081.html

[2] Quercy, A. (2025). ORCID https://orcid.org/0009-0000-2662-7790

[3] Quercy, A. (2026). Computational Image Analysis Standard. https://ideamorphism.org/en/measurements/2025/09/ids-cmp-2025-computational-image-analysis-standard-5dq9.html

EPISTEMIC PROFILE

Claim type	computational analysis
Voice	third person
Epistemic status	empirical measurement
Methodology	computational analysis
Certainty	high

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