AQC1074 | NAN-COL000637

Nanopublication — Computational Image Analysis - AQC1074

by Arnaud Quercy · Watercolor Study in Eb Maj7 No. 1 · 2026

CLAIM 1: COMPUTATIONAL IMAGE ANALYSIS - AQC1074

K-means clustering (10 colors) performed on artwork Watercolor Study in Eb Maj7 No. 1 (AQC1074) [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: 1732x2309 pixels. Analysis date: 2026-07-13.

A) COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		BE8248	20.4	orange	peru
2		C68F59	19.3	orange	ochre
3		94718A	16.8	red-violet	dusty mauve
4		6C5E7C	9.0	violet	dusty mauve
5		CAA17A	9.0	orange	tan
6		554E6C	8.0	violet	dusty mauve
7		963D09	6.9	orange	russet
8		100A0F	4.8	black	black
9		272229	3.4	red-violet	very dark gray
10		8D5C52	2.3	red-orange	burnt sienna
11		263A58	0.3	blue-violet	grayish purple [Accent]
12		B28E9A	0.3	red	rosybrown [Accent]

Color Families:

Family	%
orange	55.6
red-violet	20.2
violet	17.0
black	4.8
red-orange	2.3
blue-violet	0.3
red	0.3

Accent Colors:

Hex	Family	Name	Chroma
263A58	blue-violet	grayish purple	21.2
B28E9A	red	rosybrown	16.0

B) TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.159
Mean Local Roughness	0.02
Roughness Uniformity	0.015
Edge Density	0.043
Mean Gradient Magnitude	0.148
Gradient Variance	0.034
Gradient Smoothness	0.0
Directional Coherence	0.003
Pattern Complexity	0.14
Pattern Repetition	1.0
Detail Frequency Ratio	0.627
Spatial Variation	0.105
Texture Consistency	0.5

C) BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.475
Brightness Variance	0.159
Brightness Uniformity	0.666
Brightness Skewness	-1.136
Brightness Entropy	7.012
Rms Contrast	0.159
Michelson Contrast	1.0
Weber Contrast	0.565
Mean Local Contrast	0.021
Contrast Uniformity	0.182
Dynamic Range	0.843
Effective Dynamic Range	0.561
Shadow Percentage	16.276
Midtone Percentage	79.381
Highlight Percentage	4.344
Shadow Clipping	0.014
Highlight Clipping	0.0
Tonal Balance	0.0
Fine Contrast	0.012
Medium Contrast	0.025
Coarse Contrast	0.035
Multiscale Contrast Ratio	0.345
Edge Contrast	0.148
Contrast Clustering	0.5

D) SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.73
Color Clustering	0.511
Color Transition Smoothness	0.613
Transition Uniformity	0.741
Sharp Transition Ratio	0.1
Transition Directionality	0.005
Mean Saturation	0.462
Saturation Variance	0.047
Low Saturation Ratio	0.357
Medium Saturation Ratio	0.551
High Saturation Ratio	0.093
Saturation Clustering	0.998
Hue Concentration	0.642
Complementary Balance	0.003
Analogous Dominance	0.687
Temperature Bias	0.783

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 Eb Maj7 No. 1 - Catalogue Raisonné. https://arnaudquercy.art/en/catalogue-raisonne/AQC1074.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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