AQC0720

Nanopublication — Computational Image Analysis - AQC0720

by Arnaud Quercy · C Major - Research on Harmony - Variation 18 · 2024

Claim 1: Computational Image Analysis - AQC0720

> K-means clustering analysis [3] (10 colors) performed on artwork C Major [1] - Research on Harmony - Variation 3 (AQC0720) [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		B93247	19.5	red-orange	brown
2		DC5A30	16.3	orange	chocolate
3		A05430	14.5	orange	burnt sienna
4		E5C3DD	12.5	red-violet	thistle
5		2F3745	10.2	blue-violet	grayish purple
6		E9D5C3	9.6	orange	wheat
7		B3674A	5.6	orange	indianred
8		424F61	5.4	blue-violet	grayish purple
9		252025	4.1	gray	very dark gray
10		CABBB1	2.4	orange	silver
11		2B0109	0.3	red	very dark red [Accent]
12		816B4B	0.3	yellow-orange	dimgray [Accent]
13		73715C	0.3	yellow	dimgray [Accent]

Color Families:

Family	%
orange	48.4
red-orange	19.5
blue-violet	15.5
red-violet	12.5
gray	4.1
red	0.3
yellow-orange	0.3
yellow	0.3

Accent Colors:

Hex	Family	Name	Chroma
2B0109	red	very dark red	20.6
816B4B	yellow-orange	dimgray	21.4
73715C	yellow	dimgray	12.4

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.218
Mean Local Roughness	0.016
Roughness Uniformity	0.019
Edge Density	0.061
Mean Gradient Magnitude	0.128
Gradient Variance	0.046
Gradient Smoothness	0.0
Directional Coherence	0.018
Pattern Complexity	0.117
Pattern Repetition	1.0
Detail Frequency Ratio	0.62
Spatial Variation	0.191
Texture Consistency	0.426

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.483
Brightness Variance	0.218
Brightness Uniformity	0.548
Brightness Skewness	0.548
Brightness Entropy	7.096
Rms Contrast	0.218
Michelson Contrast	1.0
Weber Contrast	0.734
Mean Local Contrast	0.017
Contrast Uniformity	0.0
Dynamic Range	1.0
Effective Dynamic Range	0.678
Shadow Percentage	22.647
Midtone Percentage	52.911
Highlight Percentage	24.442
Shadow Clipping	0.002
Highlight Clipping	0.001
Tonal Balance	0.0
Fine Contrast	0.008
Medium Contrast	0.022
Coarse Contrast	0.033
Multiscale Contrast Ratio	0.25
Edge Contrast	0.128
Contrast Clustering	0.574

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.802
Color Clustering	0.646
Color Transition Smoothness	0.668
Transition Uniformity	0.677
Sharp Transition Ratio	0.1
Transition Directionality	0.033
Mean Saturation	0.504
Saturation Variance	0.07
Low Saturation Ratio	0.328
Medium Saturation Ratio	0.285
High Saturation Ratio	0.387
Saturation Clustering	0.999
Hue Concentration	0.574
Complementary Balance	0.033
Analogous Dominance	0.776
Temperature Bias	0.555

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). C Major - Research on Harmony - Variation 18 — Catalog raisonné. https://arnaudquercy.art/en/catalogue-raisonne/AQC0720.html

[2] Quercy, A. (2025). Untitled - Gallery. https://artquamanima.com/en/artworks/2024/01/c-major-research-on-harmony-variation-18_808.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)

`0879eedc4a4efc0d37aaa27e5cc7e11a0e36949d-c741795721c7a11a21d53ebf`

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