AQC0621

Nanopublication — Computational Image Analysis - AQC0621

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

Claim 1: Computational Image Analysis - AQC0621

> Computational image analysis [3] of artwork C Major [1] - Research on Harmony (AQC0621) [2] by Arnaud Quercy [2] using k-means clustering method with 10 color extraction parameters. Analysis includes color distribution, texture metrics, brightness/contrast measurements, and spatial pattern characterization. Analysis completed on 2026-02-04.

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]: 2372x3558 pixels. Analysis date: 2026-02-04.

COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		BB200C	17.6	red-orange	firebrick
2		D8B62E	13.4	yellow-orange	goldenrod
3		ECD040	13.2	yellow-orange	sandybrown
4		DF5B12	12.7	orange	chocolate
5		CD3723	10.1	red-orange	brown
6		2B241C	9.7	yellow-orange	very dark gray
7		ED6B30	9.7	orange	tomato
8		7E371A	8.5	orange	russet
9		675D58	3.4	orange	dimgray
10		E8E0DB	1.7	white	gainsboro
11		C7B864	0.3	yellow	ochre [Accent]
12		5F2A33	0.3	red	russet [Accent]

Color Families:

Family	%
yellow-orange	36.3
orange	34.3
red-orange	27.7
white	1.7
yellow	0.3
red	0.3

Accent Colors:

Hex	Family	Name	Chroma
C7B864	yellow	ochre	44.4
5F2A33	red	russet	25.5

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.211
Mean Local Roughness	0.024
Roughness Uniformity	0.019
Edge Density	0.143
Mean Gradient Magnitude	0.199
Gradient Variance	0.045
Gradient Smoothness	0.0
Directional Coherence	0.009
Pattern Complexity	0.123
Pattern Repetition	1.0
Detail Frequency Ratio	0.625
Spatial Variation	0.165
Texture Consistency	0.484

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.47
Brightness Variance	0.211
Brightness Uniformity	0.55
Brightness Skewness	0.239
Brightness Entropy	7.55
Rms Contrast	0.211
Michelson Contrast	1.0
Weber Contrast	0.701
Mean Local Contrast	0.026
Contrast Uniformity	0.282
Dynamic Range	1.0
Effective Dynamic Range	0.655
Shadow Percentage	32.949
Midtone Percentage	41.593
Highlight Percentage	25.458
Shadow Clipping	0.012
Highlight Clipping	0.007
Tonal Balance	0.211
Fine Contrast	0.013
Medium Contrast	0.032
Coarse Contrast	0.051
Multiscale Contrast Ratio	0.267
Edge Contrast	0.199
Contrast Clustering	0.516

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.762
Color Clustering	0.492

Metric	Value
Color Transition Smoothness	0.517
Transition Uniformity	0.704
Sharp Transition Ratio	0.1
Transition Directionality	0.011
Mean Saturation	0.753
Saturation Variance	0.056
Low Saturation Ratio	0.103
Medium Saturation Ratio	0.096
High Saturation Ratio	0.801
Saturation Clustering	0.998
Hue Concentration	0.946
Complementary Balance	0.0
Analogous Dominance	0.999
Temperature Bias	0.993

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 — Catalog raisonné. https://arnaudquercy.art/en/catalogue-raisonne/AQC0621.html

[2] Quercy, A. (2024). C Major - Research on Harmony - Gallery. https://artquamanima.com/en/artworks/2024/01/c-major-research-on-harmony_6xq.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)


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2fb2dcf6debf85ae9c35860f4da1cfaaf266b3e5ac6736-
fa73ae5de96a2488b3
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Artist	Arnaud Quercy
Date	2024
Collection	Synesthetic Explorations
Certificate	20240615-0117
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