

Nanopublication — Computational Image Analysis - AQC0697

by Arnaud Quercy · C minor - Research on Harmony - Variation 5 · 2024

Claim 1: Computational Image Analysis - AQC0697

K-means clustering analysis [3] (10 colors) performed on artwork C minor - Research [1] on Harmony - Variation 5 (AQC0697) [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]: 2370x2370 pixels. Analysis date: 2026-02-04.

COLOR ANALYSIS

Rank	Color Hex	%	Family	Name
1	BDA781	19.8	yellow-orange	tan
2	786D6A	15.5	red-orange	dimgray
3	E18762	14.2	orange	darksalmon
4	D9431D	13.7	red-orange	chocolate
5	3C2F45	11.5	red-violet	dusty mauve
6	C72B21	6.6	red-orange	firebrick
7	E56742	5.9	red-orange	tomato
8	503829	5.6	orange	dark brown
9	D6B498	4.2	orange	burlywood
10	AC9075	3.0	orange	rosybrown
11	391122	0.3	red	very dark red [Accent]

Color Families:

Family	%
red-orange	41.7
orange	27.0
yellow-orange	19.8
red-violet	11.5
red	0.3

Accent Colors:

Hex	Family Name	Chroma
391122	red	very dark red 22.1

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.163
Mean Local Roughness	0.003
Roughness Uniformity	0.009
Edge Density	0.004

Metric Value

Mean Gradient Magnitude	0.023
Gradient Variance	0.007
Gradient Smoothness	0.0
Directional Coherence	0.43
Pattern Complexity	0.079
Pattern Repetition	1.0
Detail Frequency Ratio	0.607
Spatial Variation	0.119
Texture Consistency	0.539

BRIGHTNESS & CONTRAST ANALYSIS

Metric Value

Mean Brightness	0.488
Brightness Variance	0.163
Brightness Uniformity	0.666
Brightness Skewness	-0.307
Brightness Entropy	6.539
Rms Contrast	0.163
Michelson Contrast	0.958
Weber Contrast	0.669
Mean Local Contrast	0.003
Contrast Uniformity	0.0
Dynamic Range	0.898
Effective Dynamic Range	0.486
Shadow Percentage	17.9
Midtone Percentage	66.01
Highlight Percentage	16.091
Shadow Clipping	0.0
Highlight Clipping	0.0
Tonal Balance	0.0
Fine Contrast	0.002
Medium Contrast	0.004
Coarse Contrast	None
Multiscale Contrast Ratio	1.0
Edge Contrast	0.023
Contrast Clustering	0.461

SPATIAL DISTRIBUTION ANALYSIS

Metric Value

Spatial Coherence	0.811
Color Clustering	0.45
Color Transition Smoothness	0.93
Transition Uniformity	0.95
Sharp Transition Ratio	0.099
Transition Directionality	0.436
Mean Saturation	0.461

Metric	Value
Saturation Variance	0.065
Low Saturation Ratio	0.314
Medium Saturation Ratio	0.445
High Saturation Ratio	0.241
Saturation Clustering	1.0
Hue Concentration	0.822
Complementary Balance	0.0
Analogous Dominance	0.866
Temperature Bias	0.872

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 minor - Research on Harmony - Variation 5 — Catalog raisonné. <https://arnaudquercy.art/en/catalogue-raisonne/AQC0697.html>

[2] Quercy, A. (2025). Untitled - Gallery. https://artquamanima.com/en/artworks/2024/01/c-minor-research-on-harmony-variation-5_7ra.html

[3] Quercy, A. (2025). Computational Image Analysis Standard - MMIDS-CMP-2025 h <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)

71c3023ff40ec4d864cffd1e221110cca3aa21e19e-f54020cd21437354460e31

Artist Arnaud Quercy

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