

Nanopublication — Computational Image Analysis - AQC0583

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













Claim 1: Computational Image Analysis - AQC0583

K-means clustering analysis [3] (10 colors) performed on artwork C minor - Research [1] on Harmony (AQC0583) [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]: 2425x3074 pixels. Analysis date: 2026-02-04.

COLOR ANALYSIS

Rank	Color Hex	%	Family	Name
1		14.8	red-orange	rosybrown
2		13.2	violet	very dark purple
3		12.7	red-orange	very dark red
4		11.8	red-orange	palevioletred
5		9.3	red-orange	firebrick
6		9.1	red-orange	lightpink
7		8.9	orange	tan
8		8.6	red-orange	indianred
9		6.4	yellow-orange	ochre
10		5.2	orange	russet
11		0.3	red-violet	dusty mauve [Accent]
12		0.3	red	dark brown [Accent]

Color Families:

Family	%
red-orange	66.4
orange	14.0
violet	13.2
yellow-orange	6.4
red-violet	0.3
red	0.3

Accent Colors:

Hex	Family	Name	Chroma
54285E	red-violet	dusty mauve	38.4
5E3138	red	dark brown	21.4

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.241

Metric	Value
Mean Local Roughness	0.017
Roughness Uniformity	0.019
Edge Density	0.064
Mean Gradient Magnitude	0.126
Gradient Variance	0.033
Gradient Smoothness	0.0
Directional Coherence	0.051
Pattern Complexity	0.138
Pattern Repetition	1.0
Detail Frequency Ratio	0.648
Spatial Variation	0.147
Texture Consistency	0.526

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.441
Brightness Variance	0.241
Brightness Uniformity	0.454
Brightness Skewness	-0.294
Brightness Entropy	7.22
Rms Contrast	0.241
Michelson Contrast	1.0
Weber Contrast	0.87
Mean Local Contrast	0.018
Contrast Uniformity	0.0
Dynamic Range	1.0
Effective Dynamic Range	0.682
Shadow Percentage	38.664
Midtone Percentage	42.984
Highlight Percentage	18.352
Shadow Clipping	0.001
Highlight Clipping	0.0
Tonal Balance	0.0
Fine Contrast	0.01
Medium Contrast	0.023
Coarse Contrast	None
Multiscale Contrast Ratio	1.0
Edge Contrast	0.126
Contrast Clustering	0.474

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.75
Color Clustering	0.694
Color Transition Smoothness	0.674
Transition Uniformity	0.781

Metric	Value
Sharp Transition Ratio	0.1
Transition Directionality	0.058
Mean Saturation	0.52
Saturation Variance	0.077
Low Saturation Ratio	0.285
Medium Saturation Ratio	0.355
High Saturation Ratio	0.36
Saturation Clustering	0.999
Hue Concentration	0.834
Complementary Balance	0.0
Analogous Dominance	0.865
Temperature Bias	0.867

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 — Catalog raisonné. <https://arnaudquercy.art/en/catalogue-raisonne/AQC0583.html>
- [2] Quercy, A. (2025). Untitled - Gallery. https://artquamanima.com/en/artworks/2024/01/c-minor-research-on-harmony_6iy.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)

d287612dae0ac7e7ce7a088c37f76cee96f4c7e8f2d08b763af34132d73b-c7ac

Artist	Arnaud Quercy
Date	2024
Collection	Synesthetic Explorations
Certificate	20240602-0079
Asset code	AQC0583
Version	1
Published	2026-04-09

© 2026 Multimodal Institute

Published by: Art Quam Anima Publishing New York LLC — publishing.artquamanima.com

Date of publication: 2026-04-09

Persistent URI: <https://multimodal.institute/en/nanopubs/2026/02/AQC0583-computational-image-analysis-aqc0583.pdf>

Content available under Creative Commons Attribution-NonCommercial 4.0 License (CC BY-NC 4.0)