

Nanopublication – Computational Image Analysis – AQC0622

by Arnaud Quercy · C minor – Research on Harmony – Variation 3 · 2024



CLAIM 1: COMPUTATIONAL IMAGE ANALYSIS – AQC0622

Computational image analysis of artwork C minor – Research on Harmony – Variation 3 (AQC0622) ^[1] by Arnaud Quercy ^[2], performed according to IDS-CMP-2025 ^[3], 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 2025-10-03.

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: 2381x3571 pixels. Analysis date: 2025-10-03.

A) COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		404559	19.8	blue-violet	grayish purple
2		E84E0A	18.4	orange	orangered
3		C92E16	17.2	red-orange	firebrick
4		F06729	10.8	orange	chocolate
5		BB5330	8.2	orange	burnt sienna
6		96381A	7.8	orange	russet
7		1B1614	7.4	black	black
8		6E737D	5.7	blue-violet	grayish purple
9		E68063	2.7	red-orange	salmon
10		E4DDDA	2.0	white	gainsboro
11		CF6D7F	0.3	red	palevioletred [Accent]
12		423A2B	0.3	yellow-orange	darkslategray [Accent]

Color Families:

Family	%
orange	45.2
blue-violet	25.5
red-orange	20.0
black	7.4
white	2.0
red	0.3
yellow-orange	0.3

Accent Colors:

Hex	Family	Name	Chroma
CF6D7F	red	palevioletred	40.8
423A2B	yellow-orange	darkslategray	11.0

B) TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.146
Mean Local Roughness	0.021
Roughness Uniformity	0.022
Edge Density	0.097
Mean Gradient Magnitude	0.189
Gradient Variance	0.055
Gradient Smoothness	0.0
Directional Coherence	0.014
Pattern Complexity	0.112
Pattern Repetition	1.0
Detail Frequency Ratio	0.621
Spatial Variation	0.075
Texture Consistency	0.525

C) BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.385
Brightness Variance	0.146
Brightness Uniformity	0.62
Brightness Skewness	0.379
Brightness Entropy	7.097
Rms Contrast	0.146
Michelson Contrast	1.0
Weber Contrast	0.587
Mean Local Contrast	0.024
Contrast Uniformity	0.085
Dynamic Range	1.0
Effective Dynamic Range	0.463
Shadow Percentage	34.203
Midtone Percentage	63.168
Highlight Percentage	2.629
Shadow Clipping	0.013
Highlight Clipping	0.008
Tonal Balance	0.0
Fine Contrast	0.011
Medium Contrast	0.03
Coarse Contrast	0.053
Multiscale Contrast Ratio	0.2
Edge Contrast	0.189
Contrast Clustering	0.475

D) SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.732
Color Clustering	0.42
Color Transition Smoothness	0.525
Transition Uniformity	0.65
Sharp Transition Ratio	0.1
Transition Directionality	0.015
Mean Saturation	0.648
Saturation Variance	0.099
Low Saturation Ratio	0.224
Medium Saturation Ratio	0.177
High Saturation Ratio	0.599
Saturation Clustering	0.999
Hue Concentration	0.629
Complementary Balance	0.012
Analogous Dominance	0.795
Temperature Bias	0.593

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. (2024). C minor - Research on Harmony - Variation 3 - Catalogue Raisonné. <https://arnaudquercy.art/en/catalogue-raisonne/AQC0622.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

CHECKSUM (SHA-256)

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