

Nanopublication – Computational Image Analysis – AQC0605

by Arnaud Quercy · G minor – Research on Harmony · 2024



CLAIM 1: COMPUTATIONAL IMAGE ANALYSIS – AQC0605

Computational image analysis of artwork G minor – Research on Harmony (AQC0605) [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: 2678x3570 pixels. Analysis date: 2025-10-03.

A) COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		C8380D	25.1	red-orange	firebrick
2		DA4A12	20.9	orange	chocolate
3		A73317	14.2	red-orange	brown
4		BD4731	11.8	red-orange	burnt sienna
5		E5512B	11.3	red-orange	tomato
6		DE6653	7.0	red-orange	indianred
7		3D152E	4.1	red-violet	very dark purple
8		F28D7B	3.3	red-orange	darksalmon
9		643354	1.3	red-violet	dusty mauve
10		E6D4CA	1.0	orange	lightgray
11		1F050D	0.3	red	very dark gray [Accent]
12		5A417B	0.3	violet	dusty mauve [Accent]

Color Families:

Family	%
red-orange	72.7
orange	21.9
red-violet	5.4
red	0.3
violet	0.3

Accent Colors:

Hex	Family	Name	Chroma
1F050D	red	very dark gray	11.0
5A417B	violet	dusty mauve	37.6

B) TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.111
Mean Local Roughness	0.032
Roughness Uniformity	0.036
Edge Density	0.13
Mean Gradient Magnitude	0.236
Gradient Variance	0.101
Gradient Smoothness	0.0
Directional Coherence	0.027
Pattern Complexity	0.122
Pattern Repetition	1.0
Detail Frequency Ratio	0.695
Spatial Variation	0.041
Texture Consistency	0.508

C) BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.411
Brightness Variance	0.111
Brightness Uniformity	0.731
Brightness Skewness	0.685
Brightness Entropy	6.612
Rms Contrast	0.111
Michelson Contrast	1.0
Weber Contrast	0.406
Mean Local Contrast	0.033
Contrast Uniformity	0.0
Dynamic Range	1.0
Effective Dynamic Range	0.357
Shadow Percentage	15.289
Midtone Percentage	81.619
Highlight Percentage	3.092
Shadow Clipping	0.001
Highlight Clipping	0.002
Tonal Balance	0.0
Fine Contrast	0.019
Medium Contrast	0.041
Coarse Contrast	0.054
Multiscale Contrast Ratio	0.356
Edge Contrast	0.236
Contrast Clustering	0.492

D) SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.721
Color Clustering	0.353
Color Transition Smoothness	0.447
Transition Uniformity	0.427
Sharp Transition Ratio	0.1
Transition Directionality	0.037
Mean Saturation	0.822
Saturation Variance	0.024
Low Saturation Ratio	0.01
Medium Saturation Ratio	0.171
High Saturation Ratio	0.819
Saturation Clustering	0.998
Hue Concentration	0.976
Complementary Balance	0.0
Analogous Dominance	0.981
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 Ideamorphic Studies' computational imaging systems.

REFERENCES

[1] Quercy, A. (2024). G minor - Research on Harmony - Catalogue Raisonné. <https://arnaudquercy.art/en/catalogue-raisonne/AQC0605.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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