

Nanopublication – Computational Image Analysis –
AQC0604

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



CLAIM 1: COMPUTATIONAL IMAGE ANALYSIS – AQC0604

Computational image analysis of artwork G Major – Research on Harmony (AQC0604) ^[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: 2684x3578 pixels. Analysis date: 2025-10-03.

A) COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		A92F16	23.3	red-orange	firebrick
2		EB6008	21.9	orange	chocolate
3		C63B19	18.0	red-orange	brown
4		479A4A	14.0	yellow-green	seagreen
5		C84D36	11.0	red-orange	indianred
6		E36F5B	4.6	red-orange	coral
7		AAC567	3.0	yellow-green	ochre
8		78BD39	2.3	yellow-green	yellowgreen
9		EDAF98	1.5	orange	burlywood
10		362212	0.5	orange	very dark orange
11		CDCBB0	0.3	yellow	silver [Accent]
12		79682A	0.3	yellow-orange	dark brown [Accent]

Color Families:

Family	%
red-orange	56.8
orange	23.9
yellow-green	19.3
yellow	0.3
yellow-orange	0.3

Accent Colors:

Hex	Family	Name	Chroma
CDCBB0	yellow	silver	14.6
79682A	yellow-orange	dark brown	36.0

B) TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.11
Mean Local Roughness	0.026
Roughness Uniformity	0.034
Edge Density	0.1
Mean Gradient Magnitude	0.188
Gradient Variance	0.087
Gradient Smoothness	0.0
Directional Coherence	0.077
Pattern Complexity	0.119
Pattern Repetition	1.0
Detail Frequency Ratio	0.695
Spatial Variation	0.063
Texture Consistency	0.62

C) BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.44
Brightness Variance	0.11
Brightness Uniformity	0.751
Brightness Skewness	0.578
Brightness Entropy	6.662
Rms Contrast	0.11
Michelson Contrast	1.0
Weber Contrast	0.448
Mean Local Contrast	0.027
Contrast Uniformity	0.0
Dynamic Range	1.0
Effective Dynamic Range	0.357
Shadow Percentage	17.817
Midtone Percentage	77.464
Highlight Percentage	4.718
Shadow Clipping	0.001
Highlight Clipping	0.001
Tonal Balance	0.0
Fine Contrast	0.015
Medium Contrast	0.033
Coarse Contrast	None
Multiscale Contrast Ratio	1.0
Edge Contrast	0.188
Contrast Clustering	0.38

D) SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.731
Color Clustering	0.346
Color Transition Smoothness	0.556
Transition Uniformity	0.503
Sharp Transition Ratio	0.1
Transition Directionality	0.092
Mean Saturation	0.791
Saturation Variance	0.03
Low Saturation Ratio	0.007
Medium Saturation Ratio	0.271
High Saturation Ratio	0.722
Saturation Clustering	0.998
Hue Concentration	0.795
Complementary Balance	0.0
Analogous Dominance	0.808
Temperature Bias	0.675

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 Major - Research on Harmony - Catalogue Raisonné. <https://arnaudquercy.art/en/catalogue-raisonne/AQC0604.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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