

Nanopublication — Computational Image Analysis - AQC0614

by Arnaud Quercy · B Major - Research on Harmony · 2024

Claim 1: Computational Image Analysis - AQC0614

Computational image analysis [3] of artwork B Major [1] - Research on Harmony (AQC0614) [2] by Arnaud Quercy [2] 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 2026-02-04.

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]: 2612x3482 pixels. Analysis date: 2026-02-04.

COLOR ANALYSIS

Rank	Color Hex	%	Family	Name
1		AADB5D 17.9	yellow-green	ochre
2		90C941 15.5	yellow-green	yellowgreen
3		4BB561 13.4	yellow-green	mediumseagreen
4		7F648F 11.4	violet	dusty mauve
5		BEBDC3 10.2	gray	silver
6		A58A7F 9.5	orange	rosybrown
7		77CC83 9.0	yellow-green	darkseagreen
8		CCF083 8.3	yellow-green	khaki
9		131011 2.6	black	black
10		464D41 2.4	yellow-green	darkslategray
11		86CBBA 0.3	green	mediumaquamarine [Accent]
12		E3ADD0 0.3	red-violet	plum [Accent]
13		5F6522 0.3	yellow	dark brown [Accent]
14		8C704E 0.3	yellow-orange	dimgray [Accent]
15		C8A59C 0.3	red-orange	tan [Accent]

Color Families:

Family	%
yellow-green	66.4
violet	11.4
gray	10.2

Family	%
orange	9.5
black	2.6
green	0.3
red-violet	0.3
yellow	0.3
yellow-orange	0.3
red-orange	0.3

Accent Colors:

Hex	Family	Name	Chroma
86CBBA	green	mediumaquamarine	26.1
E3ADD0	red-violet	plum	26.9
5F6522	yellow	dark brown	37.9
8C704E	yellow-orange	dimgray	23.8
C8A59C	red-orange	tan	14.9

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.163
Mean Local Roughness	0.027
Roughness Uniformity	0.025
Edge Density	0.157
Mean Gradient Magnitude	0.216
Gradient Variance	0.067
Gradient Smoothness	0.0
Directional Coherence	0.034
Pattern Complexity	0.121
Pattern Repetition	1.0
Detail Frequency Ratio	0.633
Spatial Variation	0.09
Texture Consistency	0.625

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.631
Brightness Variance	0.163
Brightness Uniformity	0.741
Brightness Skewness	-1.185
Brightness Entropy	7.188
Rms Contrast	0.163
Michelson Contrast	1.0
Weber Contrast	0.429
Mean Local Contrast	0.029
Contrast Uniformity	0.139
Dynamic Range	1.0
Effective Dynamic Range	0.518
Shadow Percentage	5.16

Metric	Value
Midtone Percentage	46.426
Highlight Percentage	48.413
Shadow Clipping	0.02
Highlight Clipping	0.004
Tonal Balance	0.0
Fine Contrast	0.015
Medium Contrast	0.036
Coarse Contrast	None
Multiscale Contrast Ratio	1.0
Edge Contrast	0.216
Contrast Clustering	0.375

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.715
Color Clustering	0.504
Color Transition Smoothness	0.475
Transition Uniformity	0.57
Sharp Transition Ratio	0.1
Transition Directionality	0.039
Mean Saturation	0.457
Saturation Variance	0.042
Low Saturation Ratio	0.302
Medium Saturation Ratio	0.626
High Saturation Ratio	0.072
Saturation Clustering	0.999
Hue Concentration	0.537
Complementary Balance	0.104
Analogous Dominance	0.696
Temperature Bias	-0.121

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). B Major - Research on Harmony — Catalog raisonné. <https://arnaudquercy.art/en/catalogue-raisonne/AQC0614.html>
- [2] Quercy, A. (2025). Untitled - Gallery. https://artquamanima.com/en/artworks/2024/01/b-major-research-on-harmony_6v0.html
- [3] Quercy, A. (2025). Computational Image Analysis Standard - MMIDS-CMP-2025 h <https://multimodal.institute/en/publications/2025/10/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)

984b59178f286f10458241cce71da7caebebeab-d24d04171baf21d977350b47

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