

Nanopublication — Computational Image Analysis - AQC0919

by Arnaud Quercy · B Minor - Research on Harmony - Variations 8 · 2025

Claim 1: Computational Image Analysis - AQC0919

K-means clustering analysis [3] (10 colors) performed on artwork B Minor [1] - Research on Harmony - Variations 8 (AQC0919) [2] by Arnaud Quercy [2] on 2025-12-11. 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]: 2036x2036 pixels. Analysis date: 2025-12-11.

COLOR ANALYSIS

Rank	Color Hex	%	Family	Name
1	9EAD8B	17.4	yellow-green	darkseagreen
2	AFBE9C	16.3	yellow-green	steel gray
3	CFE658	15.1	yellow-green	ochre
4	5E5943	13.0	yellow	dark brown
5	726E57	12.3	yellow	dimgray
6	B8D125	7.4	yellow-green	yellowgreen
7	889070	6.5	yellow-green	gray
8	91D16F	6.1	yellow-green	lightgreen
9	E7E2CA	5.0	yellow	gainsboro
10	1B200A	0.9	yellow-green	very dark gray
11	FEF8EB	0.3	yellow-orange	white [Accent]
12	3A332B	0.3	orange	darkslategray [Accent]

Color Families:

Family	%
yellow-green	69.7
yellow	30.3
yellow-orange	0.3
orange	0.3

Accent Colors:

Hex	Family	Name	Chroma
FEF8EB	yellow-orange	white	7.0
3A332B	orange	darkslategray	6.3

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.173
Mean Local Roughness	0.024
Roughness Uniformity	0.019

Metric	Value
Edge Density	0.15
Mean Gradient Magnitude	0.197
Gradient Variance	0.046
Gradient Smoothness	0.0
Directional Coherence	0.004
Pattern Complexity	0.115
Pattern Repetition	1.0
Detail Frequency Ratio	0.637
Spatial Variation	0.126
Texture Consistency	0.604

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.627
Brightness Variance	0.173
Brightness Uniformity	0.724
Brightness Skewness	-0.59
Brightness Entropy	7.195
Rms Contrast	0.173
Michelson Contrast	1.0
Weber Contrast	0.557
Mean Local Contrast	0.027
Contrast Uniformity	0.251
Dynamic Range	0.996
Effective Dynamic Range	0.529
Shadow Percentage	4.552
Midtone Percentage	41.676
Highlight Percentage	53.772
Shadow Clipping	0.012
Highlight Clipping	0.0
Tonal Balance	0.0
Fine Contrast	0.013
Medium Contrast	0.033
Coarse Contrast	0.044
Multiscale Contrast Ratio	0.292
Edge Contrast	0.197
Contrast Clustering	0.396

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.768
Color Clustering	0.373
Color Transition Smoothness	0.505
Transition Uniformity	0.678
Sharp Transition Ratio	0.1
Transition Directionality	0.004

Metric	Value
Mean Saturation	0.344
Saturation Variance	0.046
Low Saturation Ratio	0.639
Medium Saturation Ratio	0.285
High Saturation Ratio	0.075
Saturation Clustering	0.999
Hue Concentration	0.948
Complementary Balance	0.0
Analogous Dominance	0.997
Temperature Bias	0.34

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 (2025). B Minor - Research on Harmony - Variations 8 — Catalog raisonné. <https://arnaudquercy.art/en/catalogue-raisonne/AQC0919.html>

[2] Quercy, A. (2025). Untitled - Gallery. https://artquamanima.com/en/artworks/2025/11/b-minor-research-on-harmony-variations-8_igu.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)

e5d3750a3a02d66880ef81e2743df2a6d2fdbb34755f2a6857d-d1aa3661c800c

Artist Arnaud Quercy

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