

Nanopublication — Computational Image Analysis - AQC0897

by Arnaud Quercy · B Minor - Research on Harmony - Variations 7 · 2025

Claim 1: Computational Image Analysis - AQC0897

K-means clustering analysis [3] (10 colors) performed on artwork B Minor [1] - Research on Harmony - Variations 7 (AQC0897) [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]: 1923x2885 pixels. Analysis date: 2025-12-11.

COLOR ANALYSIS

Rank	Color Hex	%	Family	Name
1	B6B3A5	18.6	yellow	steel gray
2	E1C798	16.8	yellow-orange	burlywood
3	505749	12.2	yellow-green	dark brown
4	C6CB1B	12.1	yellow	goldenrod
5	D6B053	9.6	yellow-orange	sandybrown
6	EE851A	9.0	orange	darkorange
7	3C3C30	8.6	yellow-green	darkslategray
8	67AC59	6.8	yellow-green	mediumseagreen
9	717669	3.3	yellow-green	dimgray
10	EDDBC5	3.0	yellow-orange	wheat

Color Families:

Family	%
yellow-green	30.9
yellow	30.7
yellow-orange	29.5
orange	9.0

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.19
Mean Local Roughness	0.027
Roughness Uniformity	0.025
Edge Density	0.149
Mean Gradient Magnitude	0.218
Gradient Variance	0.07
Gradient Smoothness	0.0
Directional Coherence	0.003
Pattern Complexity	0.112
Pattern Repetition	1.0

Metric Value

Detail Frequency Ratio	0.644
Spatial Variation	0.139
Texture Consistency	0.528

BRIGHTNESS & CONTRAST ANALYSIS

Metric Value

Mean Brightness	0.61
Brightness Variance	0.19
Brightness Uniformity	0.688
Brightness Skewness	-0.837
Brightness Entropy	7.214
Rms Contrast	0.19
Michelson Contrast	1.0
Weber Contrast	0.644
Mean Local Contrast	0.03
Contrast Uniformity	0.157
Dynamic Range	1.0
Effective Dynamic Range	0.58
Shadow Percentage	15.739
Midtone Percentage	30.784
Highlight Percentage	53.476
Shadow Clipping	0.001
Highlight Clipping	0.0
Tonal Balance	0.0
Fine Contrast	0.015
Medium Contrast	0.037
Coarse Contrast	0.052
Multiscale Contrast Ratio	0.29
Edge Contrast	0.218
Contrast Clustering	0.472

SPATIAL DISTRIBUTION ANALYSIS

Metric Value

Spatial Coherence	0.769
Color Clustering	0.374
Color Transition Smoothness	0.446
Transition Uniformity	0.523
Sharp Transition Ratio	0.1
Transition Directionality	0.0
Mean Saturation	0.399
Saturation Variance	0.092
Low Saturation Ratio	0.49
Medium Saturation Ratio	0.293
High Saturation Ratio	0.217
Saturation Clustering	0.999
Hue Concentration	0.913

Metric	Value
Complementary Balance	0.0
Analogous Dominance	0.898
Temperature Bias	0.69

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 7 — Catalog raisonné. <https://arnaudquercy.art/en/catalogue-raisonne/AQC0897.html>
- [2] Quercy, A. (2025). Untitled - Gallery. https://artquamanima.com/en/artworks/2025/11/b-minor-research-on-harmony-variations-7_i99.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)

8f2e19348c808185b331c1d482cc7985d440bf8013851c401f88b148cf0f2b-d2

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