

Nanopublication — Computational Image Analysis - AQC0691

by Arnaud Quercy · Ab minor - Research on Harmony - Variation 4 · 2024













Claim 1: Computational Image Analysis - AQC0691

Computational image analysis [3] of artwork Ab minor - Research [1] on Harmony - Variation 4 (AQC0691) [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]: 2281x2281 pixels. Analysis date: 2026-02-04.

COLOR ANALYSIS

Rank	Color Hex	%	Family	Name
1		33.4	blue-violet	grayish purple
2		18.3	blue	grayish purple
3		15.7	violet	very dark gray
4		14.5	red	dusty mauve
5		13.1	orange	dark brown
6		6.5	blue-violet	grayish purple
7		5.0	yellow-orange	dimgray
8		1.4	yellow-orange	khaki
9		1.3	yellow-orange	peru
10		1.1	yellow-orange	steel gray
11		0.3	yellow	palegoldenrod [Accent]
12		0.3	red-orange	lightgray [Accent]

Color Families:

Family	%
blue-violet	29.7
blue	18.3
violet	15.7
red	14.5
orange	13.1
yellow-orange	8.7
yellow	0.3
red-orange	0.3

Accent Colors:

Hex	Family	Name	Chroma
F8EDA0	yellow	palegoldenrod	39.6
E7CBC4	red-orange	lightgray	11.4

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.124
Mean Local Roughness	0.006
Roughness Uniformity	0.016
Edge Density	0.013
Mean Gradient Magnitude	0.045
Gradient Variance	0.017
Gradient Smoothness	0.0
Directional Coherence	0.259
Pattern Complexity	0.102
Pattern Repetition	1.0
Detail Frequency Ratio	0.676
Spatial Variation	0.097
Texture Consistency	0.133

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.335
Brightness Variance	0.124
Brightness Uniformity	0.629
Brightness Skewness	1.367
Brightness Entropy	6.48
Rms Contrast	0.124
Michelson Contrast	1.0
Weber Contrast	0.605
Mean Local Contrast	0.006
Contrast Uniformity	0.0
Dynamic Range	0.984
Effective Dynamic Range	0.337
Shadow Percentage	52.244
Midtone Percentage	44.768
Highlight Percentage	2.989
Shadow Clipping	0.0
Highlight Clipping	0.0
Tonal Balance	0.0
Fine Contrast	0.004
Medium Contrast	0.008
Coarse Contrast	None
Multiscale Contrast Ratio	1.0
Edge Contrast	0.045
Contrast Clustering	0.867

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.825
Color Clustering	0.444

Metric	Value
Color Transition Smoothness	0.874
Transition Uniformity	0.893
Sharp Transition Ratio	0.1
Transition Directionality	0.275
Mean Saturation	0.343
Saturation Variance	0.019
Low Saturation Ratio	0.412
Medium Saturation Ratio	0.584
High Saturation Ratio	0.004
Saturation Clustering	1.0
Hue Concentration	0.485
Complementary Balance	0.198
Analogous Dominance	0.7
Temperature Bias	-0.259

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). Ab minor - Research on Harmony - Variation 4 — Catalogue raisonné. <https://arnaudquercy.art/en/catalogue-raisonne/AQC0691.html>
- [2] Quercy, A. (2024). Ab minor - Research on Harmony - Variation 4 - Gallery. https://artquamanima.com/en/artworks/2024/01/ab-minor-research-on-harmony-variation-4_7oy.html
- [3] Quercy, A. (2025). Computational Image Analysis Standard - MMIDS-CMP-2025 <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)

79c0bec3ee132849ab14131ecadbe-
faac063459f8ae4049a2b9d95be1a9c84b7

Artist	Arnaud Quercy
Date	2024
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