

Nanopublication — Computational Image Analysis - AQC0656

by Arnaud Quercy · Ab minor - Research on Harmony - Variation 3 · 2024

Claim 1: Computational Image Analysis - AQC0656

K-means clustering analysis [3] (10 colors) performed on artwork Ab minor - Research [1] on Harmony - Variation 3 (AQC0656) [2] by Arnaud Quercy [2] on 2026-02-04. 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]: 2565x3420 pixels. Analysis date: 2026-02-04.

COLOR ANALYSIS

Rank	Color Hex	%	Family	Name
1	3D3733	14.7	gray	darkslategray
2	7F8381	13.1	gray	gray
3	6D6665	12.9	gray	dimgray
4	565048	11.9	yellow-orange	dark brown
5	9B9E97	11.2	gray	steel gray
6	C3BCAA	9.5	yellow	silver
7	251E11	7.6	yellow-orange	very dark gray
8	D6D942	7.0	yellow	ochre
9	EADDDB	6.5	yellow	wheat
10	BCC020	5.5	yellow	goldenrod
11	753536	0.3	red-orange	russet [Accent]
12	A76C75	0.3	red	gray [Accent]

Color Families:

Family	%
gray	52.0
yellow	28.5
yellow-orange	19.5
red-orange	0.3
red	0.3

Accent Colors:

Hex	Family	Name	Chroma
753536	red-orange	russet	30.9
A76C75	red	gray	25.5

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.227
Mean Local Roughness	0.03

Metric	Value
Roughness Uniformity	0.022
Edge Density	0.186
Mean Gradient Magnitude	0.239
Gradient Variance	0.062
Gradient Smoothness	0.0
Directional Coherence	0.008
Pattern Complexity	0.12
Pattern Repetition	1.0
Detail Frequency Ratio	0.634
Spatial Variation	0.122
Texture Consistency	0.706

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.488
Brightness Variance	0.227
Brightness Uniformity	0.536
Brightness Skewness	0.056
Brightness Entropy	7.719
Rms Contrast	0.227
Michelson Contrast	1.0
Weber Contrast	0.752
Mean Local Contrast	0.032
Contrast Uniformity	0.286
Dynamic Range	1.0
Effective Dynamic Range	0.71
Shadow Percentage	29.84
Midtone Percentage	42.486
Highlight Percentage	27.674
Shadow Clipping	0.005
Highlight Clipping	0.003
Tonal Balance	0.453
Fine Contrast	0.017
Medium Contrast	0.04
Coarse Contrast	0.057
Multiscale Contrast Ratio	0.297
Edge Contrast	0.239
Contrast Clustering	0.294

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.683
Color Clustering	0.748
Color Transition Smoothness	0.379
Transition Uniformity	0.579
Sharp Transition Ratio	0.1

Metric	Value
Transition Directionality	0.011
Mean Saturation	0.263
Saturation Variance	0.059
Low Saturation Ratio	0.771
Medium Saturation Ratio	0.124
High Saturation Ratio	0.106
Saturation Clustering	0.999
Hue Concentration	0.825
Complementary Balance	0.048
Analogous Dominance	0.929
Temperature Bias	0.529

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 3 — Catalog raisonné. <https://arnaudquercy.art/en/catalogue-raisonne/AQC0656.html>

- [2] Quercy, A. (2024). Ab minor - Research on Harmony - Variation 3 - Gallery. https://artquamanima.com/en/artworks/2024/01/ab-minor-research-on-harmony-variation-3_7bc.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)

bbdbec1b23b091ff8473ac8f552757b0c40124137a1fdf9f952f94019bf-d4598

Artist	Arnaud Quercy
Date	2024
Collection	Synesthetic Explorations
Certificate	20240615-0152
Asset code	AQC0656
Version	1
Published	2026-02-03

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Published by: Art Quam Anima Publishing New York LLC — publishing.artquamanima.com

Date of publication: 2026-04-20

Persistent URI: <https://multimodal.institute/en/nanopubs/2026/02/AQC0656-computational-image-analysis-aqc0656.pdf>

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