

Nanopublication – Computational Image Analysis – AQC0843

by Arnaud Quercy · A minor – Research on Harmony – Variation 8 · 2025



CLAIM 1: COMPUTATIONAL IMAGE ANALYSIS – AQC0843

K-means clustering analysis [3] (10 colors) performed on artwork A minor – Research [1] on Harmony – Variation 8 (AQC0843) [2] by Arnaud Quercy [2] on 2026-02-03. 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]: 2457x3276 pixels. Analysis date: 2026-02-03.

COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		CED1D2	19.6	white	lightgray
2		CBBCE2	17.7	violet	thistle
3		C7B0C8	16.1	red-violet	silver
4		CFC8B7	15.0	yellow-orange	lightgrey
5		CABD9E	10.9	yellow-orange	tan
6		BFA0AE	6.7	red	steel gray
7		A47161	5.1	red-orange	indianred
8		B48F7F	4.4	orange	rosybrown
9		2B2932	3.1	violet	very dark gray
10		4A4854	1.5	violet	dusty mauve
11		D3E1F8	0.3	blue-violet	lavender [Accent]

Color Families:

Family	%
yellow-orange	25.9
violet	22.3
white	19.6
red-violet	16.1
red	6.7
red-orange	5.1
orange	4.4
blue-violet	0.3

Accent Colors:

Hex	Family	Name	Chroma
D3E1F8	blue-violet	lavender	13.0

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.139
Mean Local Roughness	0.01
Roughness Uniformity	0.017
Edge Density	0.019
Mean Gradient Magnitude	0.085
Gradient Variance	0.034
Gradient Smoothness	0.0
Directional Coherence	0.051
Pattern Complexity	0.111
Pattern Repetition	1.0
Detail Frequency Ratio	0.601
Spatial Variation	0.056
Texture Consistency	0.583

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.72
Brightness Variance	0.139
Brightness Uniformity	0.807
Brightness Skewness	-2.586
Brightness Entropy	6.3
Rms Contrast	0.139
Michelson Contrast	1.0
Weber Contrast	0.325
Mean Local Contrast	0.011
Contrast Uniformity	0.0
Dynamic Range	1.0
Effective Dynamic Range	0.388
Shadow Percentage	4.267
Midtone Percentage	12.003
Highlight Percentage	83.73
Shadow Clipping	0.004
Highlight Clipping	0.0
Tonal Balance	0.0
Fine Contrast	0.005
Medium Contrast	0.014
Coarse Contrast	0.025
Multiscale Contrast Ratio	0.215
Edge Contrast	0.085
Contrast Clustering	0.417

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.737
Color Clustering	0.828
Color Transition Smoothness	0.78
Transition Uniformity	0.763
Sharp Transition Ratio	0.1
Transition Directionality	0.065
Mean Saturation	0.158
Saturation Variance	0.01
Low Saturation Ratio	0.916
Medium Saturation Ratio	0.084
High Saturation Ratio	0.0
Saturation Clustering	1.0
Hue Concentration	0.745
Complementary Balance	0.042
Analogous Dominance	0.825
Temperature Bias	0.835

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). A minor - Research on Harmony - Variation 8 - Catalog raisonn  . <https://arnaudquercy.art/en/catalogue-raisonne/AQC0843.html>

[2] Quercy, A. (2025). A minor - Research on Harmony - Variation 8 - Gallery. https://artquamanima.com/en/art-works/2025/01/a-minor-research-on-harmony-variation-8_9c2.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)

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