AQC0646

Nanopublication — Computational Image Analysis - AQC0646

by Arnaud Quercy · Ab minor - Research on Harmony - Variation 2 · 2024

Claim 1: Computational Image Analysis - AQC0646

> Computational image analysis [3] of artwork Ab minor - Research [1] on Harmony - Variation 2 (AQC0646) [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]: 1750x2625 pixels. Analysis date: 2026-02-04.

COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		AEDC41	33.3	yellow-green	yellowgreen
2		2C608E	16.0	blue-violet	grayish purple
3		18457A	12.9	blue-violet	grayish purple
4		447AA7	8.9	blue-violet	grayish purple
5		2E2B40	8.8	violet	very dark gray
6		080806	6.9	black	black
7		EEE7D4	5.8	yellow	antiquewhite
8		CED1BE	3.3	yellow-green	lightgray
9		81A7C2	2.3	blue	steel gray
10		6F6C57	1.9	yellow	dimgray
11		80682B	0.3	yellow-orange	burnt sienna [Accent]
12		A56B30	0.3	orange	burnt sienna [Accent]
13		B9DCDE	0.3	blue-green	powderblue [Accent]
14		649992	0.3	green	cadetblue [Accent]
15		61494D	0.3	red	dimgray [Accent]

Color Families:

Family	%
blue-violet	37.8
yellow-green	36.7
violet	8.8
yellow	7.6
black	6.9
blue	2.3
yellow-orange	0.3
orange	0.3
blue-green	0.3
green	0.3
red	0.3

Accent Colors:

Hex	Family	Name	Chroma
80682B	yellow-orange	burnt sienna	37.1
A56B30	orange	burnt sienna	44.8
B9DCDE	blue-green	powderblue	12.1
649992	green	cadetblue	19.1
61494D	red	dimgray	11.2

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.266
Mean Local Roughness	0.024
Roughness Uniformity	0.031
Edge Density	0.111
Mean Gradient Magnitude	0.197
Gradient Variance	0.098
Gradient Smoothness	0.0
Directional Coherence	0.03
Pattern Complexity	0.127
Pattern Repetition	1.0
Detail Frequency Ratio	0.629
Spatial Variation	0.191
Texture Consistency	0.48

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.492
Brightness Variance	0.266
Brightness Uniformity	0.458
Brightness Skewness	-0.063
Brightness Entropy	7.365
Rms Contrast	0.266
Michelson Contrast	1.0
Weber Contrast	0.783
Mean Local Contrast	0.027
Contrast Uniformity	0.0
Dynamic Range	1.0
Effective Dynamic Range	0.843
Shadow Percentage	35.316
Midtone Percentage	21.851
Highlight Percentage	42.833
Shadow Clipping	0.074
Highlight Clipping	0.018
Tonal Balance	0.0

Metric	Value
Fine Contrast	0.013
Medium Contrast	0.034
Coarse Contrast	None
Multiscale Contrast Ratio	1.0
Edge Contrast	0.197
Contrast Clustering	0.52

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.756
Color Clustering	0.697
Color Transition Smoothness	0.484
Transition Uniformity	0.322
Sharp Transition Ratio	0.1
Transition Directionality	0.034
Mean Saturation	0.605
Saturation Variance	0.047
Low Saturation Ratio	0.13
Medium Saturation Ratio	0.442
High Saturation Ratio	0.428
Saturation Clustering	0.997
Hue Concentration	0.319
Complementary Balance	0.098
Analogous Dominance	0.527
Temperature Bias	-0.409

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 2 — Catalog raisonné. https://arnaudquercy.art/en/catalogue-raisonne/AQC0646.html

[2] Quercy, A. (2024). Ab minor - Research on Harmony - Variation 2 - Gallery. https://artquamanima.com/en/artworks/2024/01/ab-minor-research-on-harmony-variation-2_77g.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)

640916dd55fbaf5b810f9772c7b0819865456f2f5a0f77c16d34bdfb-d9e73d87

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