Nanopublication — Computational Image Analysis - AQC0767

by Arnaud Quercy · A Minor - Research on Harmony - Variation 5 · 2024

Claim 1: Computational Image Analysis - AQC0767

> K-means clustering analysis [3] (10 colors) performed on artwork A Minor [1] - Research on Harmony - Variation 5 (AQC0767) [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]: 2452x3679 pixels. Analysis date: 2026-02-04.

COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		C9A17C	13.5	orange	tan
2		D9B1B5	12.9	red	silver
3		8D877B	11.5	yellow-orange	gray
4		AB2C30	11.3	red-orange	brown
5		A39F96	10.9	yellow-orange	steel gray
6		1F1A1E	10.4	gray	very dark gray
7		C1815E	9.0	orange	peru
8		754527	8.8	orange	russet
9		956B2A	8.7	yellow-orange	burnt sienna
10		CE992F	3.1	yellow-orange	goldenrod
11		DBD195	0.3	yellow	burlywood [Accent]

Color Families:

Family	%
yellow-orange	34.2
orange	31.3
red	12.9
red-orange	11.3
gray	10.4
yellow	0.3

Accent Colors:

Hex	Family	Name	Chroma
DBD195	yellow	burlywood	31.6

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.196
Mean Local Roughness	0.012
Roughness Uniformity	0.013
Edge Density	0.04
Mean Gradient Magnitude	0.132
Gradient Variance	0.038
Gradient Smoothness	0.0
Directional Coherence	0.017
Pattern Complexity	0.11
Pattern Repetition	1.0
Detail Frequency Ratio	0.569
Spatial Variation	0.084
Texture Consistency	0.615

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.5
Brightness Variance	0.196
Brightness Uniformity	0.607
Brightness Skewness	-0.602
Brightness Entropy	7.42
Rms Contrast	0.196
Michelson Contrast	1.0
Weber Contrast	0.724
Mean Local Contrast	0.016
Contrast Uniformity	0.0
Dynamic Range	1.0
Effective Dynamic Range	0.643
Shadow Percentage	21.525
Midtone Percentage	56.702
Highlight Percentage	21.774
Shadow Clipping	0.006
Highlight Clipping	0.0
Tonal Balance	0.13
Fine Contrast	0.006
Medium Contrast	0.019
Coarse Contrast	0.04
Multiscale Contrast Ratio	0.141
Edge Contrast	0.132
Contrast Clustering	0.385

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.704
Color Clustering	0.625
Color Transition Smoothness	0.656
Transition Uniformity	0.737
Sharp Transition Ratio	0.1
Transition Directionality	0.023

Metric	Value
Mean Saturation	0.417
Saturation Variance	0.07
Low Saturation Ratio	0.418
Medium Saturation Ratio	0.339
High Saturation Ratio	0.243
Saturation Clustering	0.999
Hue Concentration	0.845
Complementary Balance	0.029
Analogous Dominance	0.93
Temperature Bias	0.904

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). A Minor - Research on Harmony - Variation 5 — Catalog raisonné. https://arnaudquercy.art/en/catalogue-raisonne/AQC0767.html

[2] Quercy, A. (2025). Untitled - Gallery. https://artquamanima.com/en/artworks/2024/01/a-minor-research-on-harmony-variation-5_8ii.html

[3] Quercy, A. (2025). Computational Image Analysis Standard - MMIDS-CMP-2025 https://multimodal.institute/en/publications/2025/10/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)

`f526c52e3e3ace22b1680fd6d14840bddbce55ff41d5255435c77b-cb5883c427`

Artist	Arnaud Quercy
Date	2024
Collection	Synesthetic Explorations
Certificate	20241201-0264
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