

Nanopublication — Computational Image Analysis - AQC0753

by Arnaud Quercy · D Major - Research on Harmony - Variation 8 · 2024

Claim 1: Computational Image Analysis - AQC0753

K-means clustering analysis [3] (10 colors) performed on artwork D Major [1] - Research on Harmony - Variation 8 (AQC0753) [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]: 2986x3981 pixels. Analysis date: 2026-02-04.

COLOR ANALYSIS

Rank	Color Hex	%	Family	Name
1	 CC891F	18.3	orange	darkgoldenrod
2	 22242A	15.5	gray	very dark gray
3	 DEA140	13.4	yellow-orange	goldenrod
4	 E7C391	10.9	yellow-orange	burlywood
5	 D7B27D	10.7	yellow-orange	tan
6	 B2AB9D	9.7	yellow-orange	steel gray
7	 374644	8.8	green	darkslategray
8	 C8C1B3	7.1	yellow-orange	silver
9	 81938C	2.9	green	lightslategray
10	 88542A	2.7	orange	burnt sienna
11	 411607	0.3	red-orange	very dark red [Accent]
12	 696825	0.3	yellow	dark brown [Accent]
13	 5BA373	0.3	yellow-green	mediumseagreen [Accent]

Color Families:

Family	%
yellow-orange	51.8
orange	21.0
gray	15.5
green	11.7
red-orange	0.3
yellow	0.3
yellow-green	0.3

Accent Colors:

Hex	Family	Name	Chroma
411607	red-orange	very dark red	27.6
696825	yellow	dark brown	38.1
5BA373	yellow-green	mediumseagreen	38.5

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.225
Mean Local Roughness	0.019
Roughness Uniformity	0.015
Edge Density	0.105
Mean Gradient Magnitude	0.173
Gradient Variance	0.036
Gradient Smoothness	0.0
Directional Coherence	0.008
Pattern Complexity	0.119
Pattern Repetition	1.0
Detail Frequency Ratio	0.608
Spatial Variation	0.182
Texture Consistency	0.438

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.547
Brightness Variance	0.225
Brightness Uniformity	0.589
Brightness Skewness	-0.817
Brightness Entropy	7.214
Rms Contrast	0.225
Michelson Contrast	1.0
Weber Contrast	0.791
Mean Local Contrast	0.023
Contrast Uniformity	0.21
Dynamic Range	1.0
Effective Dynamic Range	0.659
Shadow Percentage	24.101
Midtone Percentage	35.301
Highlight Percentage	40.598
Shadow Clipping	0.001
Highlight Clipping	0.0
Tonal Balance	0.0
Fine Contrast	0.009
Medium Contrast	0.027
Coarse Contrast	0.044
Multiscale Contrast Ratio	0.207
Edge Contrast	0.173
Contrast Clustering	0.562

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.739
Color Clustering	0.639
Color Transition Smoothness	0.556
Transition Uniformity	0.754
Sharp Transition Ratio	0.1
Transition Directionality	0.007
Mean Saturation	0.443
Saturation Variance	0.077
Low Saturation Ratio	0.379
Medium Saturation Ratio	0.346
High Saturation Ratio	0.276
Saturation Clustering	0.999
Hue Concentration	0.622
Complementary Balance	0.136
Analogous Dominance	0.796
Temperature Bias	0.6

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). D Major - Research on Harmony - Variation 8 — Catalog raisonné. <https://arnaudquercy.art/en/catalogue-raisonne/AQC0753.html>
- [2] Quercy, A. (2025). Untitled - Gallery. https://artquamanima.com/en/artworks/2024/01/d-major-research-on-harmony-variation-8_8d2.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)

7e8975c6b6bc7f4a62a8535f9fc9ba93322172d9a72d023a5e37a60471d-c00dc

Artist	Arnaud Quercy
Date	2024
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