

# Nanopublication — Computational Image Analysis - AQC0527

by Arnaud Quercy · D Major9 - Research on Harmony - Variation 7 · 2024

## Claim 1: Computational Image Analysis - AQC0527

K-means clustering analysis [3] (10 colors) performed on artwork D Major9 - Research [1] on Harmony - Variation 7 (AQC0527) [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]: 2683x3685 pixels. Analysis date: 2026-02-04.

### COLOR ANALYSIS

Rank	Color Hex	%	Family	Name
1	 D2A326	15.2	yellow-orange	goldenrod
2	 33312D	15.1	gray	darkslategray
3	 9A9C64	12.0	yellow	ochre
4	 B0732E	11.3	orange	burnt sienna
5	 E3B53B	10.7	yellow-orange	sandybrown
6	 B5B077	9.7	yellow	ochre
7	 7A7469	9.5	yellow-orange	dimgray
8	 E1CAA2	7.6	yellow-orange	burlywood
9	 5D554B	6.3	orange	dark brown
10	 E5E7DF	2.6	white	white
11	 79B672	0.3	yellow-green	darkseagreen [Accent]

### Color Families:

Family	%
yellow-orange	43.1
yellow	21.6
orange	17.6
gray	15.1
white	2.6
yellow-green	0.3

### Accent Colors:

Hex	Family	Name	Chroma
79B672	yellow-green	darkseagreen	43.9

### TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.195
Mean Local Roughness	0.018
Roughness Uniformity	0.019

Metric	Value
Edge Density	0.075
Mean Gradient Magnitude	0.158
Gradient Variance	0.04
Gradient Smoothness	0.0
Directional Coherence	0.005
Pattern Complexity	0.108
Pattern Repetition	1.0
Detail Frequency Ratio	0.623
Spatial Variation	0.13
Texture Consistency	0.547

### BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.544
Brightness Variance	0.195
Brightness Uniformity	0.641
Brightness Skewness	-0.475
Brightness Entropy	7.359
Rms Contrast	0.195
Michelson Contrast	1.0
Weber Contrast	0.732
Mean Local Contrast	0.02
Contrast Uniformity	0.054
Dynamic Range	1.0
Effective Dynamic Range	0.643
Shadow Percentage	17.205
Midtone Percentage	53.691
Highlight Percentage	29.104
Shadow Clipping	0.001
Highlight Clipping	0.021
Tonal Balance	0.043
Fine Contrast	0.009
Medium Contrast	0.025
Coarse Contrast	0.043
Multiscale Contrast Ratio	0.213
Edge Contrast	0.158
Contrast Clustering	0.453

### SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.727
Color Clustering	0.646
Color Transition Smoothness	0.601
Transition Uniformity	0.748
Sharp Transition Ratio	0.1
Transition Directionality	0.009

Metric	Value
Mean Saturation	0.432
Saturation Variance	0.084
Low Saturation Ratio	0.384
Medium Saturation Ratio	0.299
High Saturation Ratio	0.317
Saturation Clustering	1.0
Hue Concentration	0.97
Complementary Balance	0.0
Analogous Dominance	0.992
Temperature Bias	0.884

## 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 Major9 - Research on Harmony - Variation 7 — Catalog raisonné. <https://arnaudquercy.art/en/catalogue-raisonne/AQC0527.html>

[2] Quercy, A. (2025). Untitled - Gallery. [https://artquamanima.com/en/artworks/2024/01/d-major9-research-on-harmony-variation-7\\_5x6.html](https://artquamanima.com/en/artworks/2024/01/d-major9-research-on-harmony-variation-7_5x6.html)

[3] Quercy, A. (2025). Computational Image Analysis Standard - MMIDS-CMP-2025 h <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)

1b60848acc8f355db5325b3c116f4e4b566033e8696a713e4bf2a05b-b307f089

**Artist** Arnaud Quercy

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