

# Nanopublication — Computational Image Analysis - AQC0662

by Arnaud Quercy · Ab Major - Research on Harmony - Variation 7 · 2024

## Claim 1: Computational Image Analysis - AQC0662

K-means clustering analysis [3] (10 colors) performed on artwork Ab Major [1] - Research on Harmony - Variation 7 (AQC0662) [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]: 2237x2983 pixels. Analysis date: 2026-02-04.

### COLOR ANALYSIS

Rank	Color Hex	%	Family	Name
1	EDA987	22.0	orange	burlywood
2	F0BDA5	14.8	orange	lightpink
3	87797E	10.4	red	dusty mauve
4	A38F8F	10.0	red-orange	rosybrown
5	626A77	9.7	blue-violet	grayish purple
6	3F5167	9.3	blue-violet	grayish purple
7	C1A8A1	7.5	red-orange	steel gray
8	615256	6.2	red	dimgray
9	EB8A60	5.5	orange	salmon
10	322F37	4.6	violet	dusty mauve
11	E2D8E1	0.3	red-violet	gainsboro [Accent]
12	09181E	0.3	blue	black [Accent]

#### Color Families:

Family	%
orange	42.2
blue-violet	18.9
red-orange	17.5
red	16.7
violet	4.6
red-violet	0.3
blue	0.3

#### Accent Colors:

Hex	Family	Name	Chroma
E2D8E1	red-violet	gainsboro	5.8
09181E	blue	black	7.2

### TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.186
Mean Local Roughness	0.026
Roughness Uniformity	0.021
Edge Density	0.144
Mean Gradient Magnitude	0.202
Gradient Variance	0.048
Gradient Smoothness	0.0
Directional Coherence	0.01
Pattern Complexity	0.124
Pattern Repetition	1.0
Detail Frequency Ratio	0.635
Spatial Variation	0.103
Texture Consistency	0.75

### BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.574
Brightness Variance	0.186
Brightness Uniformity	0.676
Brightness Skewness	-0.498
Brightness Entropy	7.315
Rms Contrast	0.186
Michelson Contrast	1.0
Weber Contrast	0.608
Mean Local Contrast	0.027
Contrast Uniformity	0.244
Dynamic Range	1.0
Effective Dynamic Range	0.545
Shadow Percentage	13.544
Midtone Percentage	42.541
Highlight Percentage	43.914
Shadow Clipping	0.004
Highlight Clipping	0.0
Tonal Balance	0.041
Fine Contrast	0.015
Medium Contrast	0.033
Coarse Contrast	0.047
Multiscale Contrast Ratio	0.308
Edge Contrast	0.202
Contrast Clustering	0.25

### SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.713
Color Clustering	0.629

Metric	Value
Color Transition Smoothness	0.479
Transition Uniformity	0.679
Sharp Transition Ratio	0.1
Transition Directionality	0.005
Mean Saturation	0.303
Saturation Variance	0.024
Low Saturation Ratio	0.477
Medium Saturation Ratio	0.515
High Saturation Ratio	0.008
Saturation Clustering	0.999
Hue Concentration	0.594
Complementary Balance	0.125
Analogous Dominance	0.786
Temperature Bias	0.616

## 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 Major - Research on Harmony - Variation 7 — Catalog raisonné. <https://arnaudquercy.art/en/catalogue-raisonne/AQC0662.html>
- [2] Quercy, A. (2024). Ab Major - Research on Harmony - Variation 7 - Gallery. [https://artquamanima.com/en/artworks/2024/01/ab-major-research-on-harmony-variation-7\\_7do.html](https://artquamanima.com/en/artworks/2024/01/ab-major-research-on-harmony-variation-7_7do.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

<b>Claim type</b>	computational analysis
<b>Voice</b>	third person
<b>Epistemic status</b>	empirical measurement
<b>Methodology</b>	computational analysis
<b>Certainty</b>	high

## CHECKSUM (SHA-256)

4ff47cba7ee74a69ca92dd561a6ce5d817beb5bd-c5fc10f7a014938f25a570ed

<b>Artist</b>	Arnaud Quercy
<b>Date</b>	2024
<b>Collection</b>	Synesthetic Explorations
<b>Certificate</b>	20240718-0158
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