

Nanopublication — Computational Image Analysis - AQC0873

by Arnaud Quercy · D Major - Research on Harmony - Variations 14 · 2025

Claim 1: Computational Image Analysis - AQC0873

K-means clustering analysis [3] (10 colors) performed on artwork D Major [1] - Research on Harmony - Variations 14 (AQC0873) [2] by Arnaud Quercy [2] on 2025-12-11. 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]: 1981x2972 pixels. Analysis date: 2025-12-11.

COLOR ANALYSIS

Rank	Color Hex	%	Family	Name
1	D9B15F	21.2	yellow-orange	sandybrown
2	ECC082	16.7	yellow-orange	burlywood
3	DD9F38	14.9	yellow-orange	goldenrod
4	4B4E41	11.0	yellow-green	darkslategray
5	AEB19F	9.3	yellow-green	steel gray
6	ED8A18	7.4	orange	darkorange
7	617554	6.1	yellow-green	dimgray
8	80A957	5.5	yellow-green	yellowgreen
9	EDE0CC	4.0	yellow-orange	bisque
10	281B0F	3.8	orange	very dark gray
11	A9A33C	0.3	yellow	yellowgreen [Accent]
12	754030	0.3	red-orange	russet [Accent]

Color Families:

Family	%
yellow-orange	56.9
yellow-green	31.9
orange	11.2
yellow	0.3
red-orange	0.3

Accent Colors:

Hex	Family	Name	Chroma
A9A33C	yellow	yellowgreen	54.1
754030	red-orange	russet	29.0

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.186
Mean Local Roughness	0.025

Metric	Value
Roughness Uniformity	0.027
Edge Density	0.114
Mean Gradient Magnitude	0.213
Gradient Variance	0.089
Gradient Smoothness	0.0
Directional Coherence	0.003
Pattern Complexity	0.114
Pattern Repetition	1.0
Detail Frequency Ratio	0.622
Spatial Variation	0.067
Texture Consistency	0.688

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.617
Brightness Variance	0.186
Brightness Uniformity	0.698
Brightness Skewness	-1.149
Brightness Entropy	7.183
Rms Contrast	0.186
Michelson Contrast	1.0
Weber Contrast	0.614
Mean Local Contrast	0.028
Contrast Uniformity	0.009
Dynamic Range	1.0
Effective Dynamic Range	0.584
Shadow Percentage	12.668
Midtone Percentage	35.369
Highlight Percentage	51.963
Shadow Clipping	0.005
Highlight Clipping	0.0
Tonal Balance	0.0
Fine Contrast	0.013
Medium Contrast	0.035
Coarse Contrast	0.058
Multiscale Contrast Ratio	0.23
Edge Contrast	0.213
Contrast Clustering	0.312

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.738
Color Clustering	0.616
Color Transition Smoothness	0.458
Transition Uniformity	0.384
Sharp Transition Ratio	0.1

Metric	Value
Transition Directionality	0.002
Mean Saturation	0.478
Saturation Variance	0.064
Low Saturation Ratio	0.271
Medium Saturation Ratio	0.515
High Saturation Ratio	0.214
Saturation Clustering	0.998
Hue Concentration	0.936
Complementary Balance	0.0
Analogous Dominance	0.939
Temperature Bias	0.871

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 (2025). D Major - Research on Harmony - Variations 14 — Catalog raisonné. <https://arnaudquercy.art/en/catalogue-raisonne/AQC0873.html>

- [2] Quercy, A. (2025). Untitled - Gallery. https://artquamanima.com/en/artworks/2025/11/d-major-research-on-harmony-variations-14_i0l.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)

2e88eb296f9656e2b844368362a35a75e84e804788d-be4a4f81974ea442528c3

Artist Arnaud Quercy

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