AQC0872

Nanopublication — Computational Image Analysis - AQC0872

by Arnaud Quercy · D Minor - Research on Harmony - Variations 9 · 2025

Claim 1: Computational Image Analysis - AQC0872

> K-means clustering analysis [3] (10 colors) performed on artwork D Minor [1] - Research on Harmony - Variations 9 (AQC0872) [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]: 1932x2898 pixels. Analysis date: 2025-12-11.

COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		D29D39	19.3	yellow-orange	peru
2		E3AE4D	18.7	yellow-orange	sandybrown
3		E8B076	17.1	orange	burlywood
4		EDC591	13.2	yellow-orange	tan
5		E37A92	11.8	red	palevioletred
6		A07974	7.4	red-orange	gray
7		56423D	4.6	red-orange	dark brown
8		F0E6D5	2.9	yellow-orange	white
9		C15665	2.8	red-orange	indianred
10		311812	2.1	red-orange	very dark red

Color Families:

Family	%
yellow-orange	54.1
orange	17.1
red-orange	17.0
red	11.8

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.15
Mean Local Roughness	0.021
Roughness Uniformity	0.023
Edge Density	0.082
Mean Gradient Magnitude	0.194
Gradient Variance	0.068
Gradient Smoothness	0.0
Directional Coherence	0.003
Pattern Complexity	0.109
Pattern Repetition	1.0
Detail Frequency Ratio	0.615
Spatial Variation	0.076
Texture Consistency	0.696

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.652
Brightness Variance	0.15
Brightness Uniformity	0.77
Brightness Skewness	-1.518
Brightness Entropy	6.98
Rms Contrast	0.15
Michelson Contrast	1.0
Weber Contrast	0.371
Mean Local Contrast	0.025
Contrast Uniformity	0.02
Dynamic Range	1.0
Effective Dynamic Range	0.541
Shadow Percentage	5.76
Midtone Percentage	38.551
Highlight Percentage	55.689
Shadow Clipping	0.0
Highlight Clipping	0.0
Tonal Balance	0.0
Fine Contrast	0.011
Medium Contrast	0.031
Coarse Contrast	0.053
Multiscale Contrast Ratio	0.199
Edge Contrast	0.194
Contrast Clustering	0.304

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.739
Color Clustering	0.55
Color Transition Smoothness	0.516
Transition Uniformity	0.542
Sharp Transition Ratio	0.1
Transition Directionality	0.005
Mean Saturation	0.52
Saturation Variance	0.032
Low Saturation Ratio	0.134
Medium Saturation Ratio	0.674
High Saturation Ratio	0.191
Saturation Clustering	0.999
Hue Concentration	0.945

Metric	Value
Complementary Balance	0.0
Analogous Dominance	0.993
Temperature Bias	1.0

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 Minor - Research on Harmony - Variations 9 — Catalog raisonné. https://arnaudquercy.art/en/catalogue-raisonne/AQC0872.html

[2] Quercy, A. (2025). Untitled - Gallery. https://artquamanima.com/en/artworks/2025/11/d-minor-research-on-harmony-variations-9_i08.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

Claim type	computational analysis
Voice	third person
Epistemic status	empirical measurement
Methodology	computational analysis
Certainty	high

CHECKSUM (SHA-256)

2bc4fe2850c030c46bd-f0d448961500cb43a8314c9e6c8ec7f9e37de4f9e913e

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