AQC0781

Nanopublication — Computational Image Analysis - AQC0781

by Arnaud Quercy · D Minor - Research on Harmony - Variation 4 · 2024

Claim 1: Computational Image Analysis - AQC0781

> K-means clustering analysis [3] (10 colors) performed on artwork D Minor [1] - Research on Harmony - Variation 4 (AQC0781) [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]: 2262x3393 pixels. Analysis date: 2026-02-04.

COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		D67710	20.2	orange	chocolate
2		833729	16.0	red-orange	russet
3		D49F6B	11.7	orange	darksalmon
4		CF8C3A	10.8	orange	peru
5		9F4940	10.2	red-orange	burnt sienna
6		A99F91	8.6	yellow-orange	rosybrown
7		282123	8.5	gray	very dark gray
8		8E8578	7.5	yellow-orange	gray
9		3F3C40	3.6	gray	dusty mauve
10		DABBA2	2.9	orange	tan
11		B75770	0.3	red	indianred [Accent]

Color Families:

Family	%
orange	45.6
red-orange	26.3
yellow-orange	16.1
gray	12.1
red	0.3

Accent Colors:

Hex	Family	Name	Chroma
B75770	red	indianred	41.2

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.172
Mean Local Roughness	0.011
Roughness Uniformity	0.011
Edge Density	0.036
Mean Gradient Magnitude	0.123
Gradient Variance	0.028
Gradient Smoothness	0.0
Directional Coherence	0.014
Pattern Complexity	0.11
Pattern Repetition	1.0
Detail Frequency Ratio	0.568
Spatial Variation	0.115
Texture Consistency	0.517

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.474
Brightness Variance	0.172
Brightness Uniformity	0.638
Brightness Skewness	-0.48
Brightness Entropy	7.204
Rms Contrast	0.172
Michelson Contrast	1.0
Weber Contrast	0.676
Mean Local Contrast	0.015
Contrast Uniformity	0.001
Dynamic Range	0.996
Effective Dynamic Range	0.537
Shadow Percentage	25.225
Midtone Percentage	63.999
Highlight Percentage	10.776
Shadow Clipping	0.0
Highlight Clipping	0.0
Tonal Balance	0.0
Fine Contrast	0.005
Medium Contrast	0.018
Coarse Contrast	0.037
Multiscale Contrast Ratio	0.148
Edge Contrast	0.123
Contrast Clustering	0.483

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.77
Color Clustering	0.471
Color Transition Smoothness	0.677
Transition Uniformity	0.802
Sharp Transition Ratio	0.1
Transition Directionality	0.023
Mean Saturation	0.554

Metric	Value
Saturation Variance	0.088
Low Saturation Ratio	0.273
Medium Saturation Ratio	0.38
High Saturation Ratio	0.347
Saturation Clustering	1.0
Hue Concentration	0.96
Complementary Balance	0.001
Analogous Dominance	0.992
Temperature Bias	0.986

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 Minor - Research on Harmony - Variation 4 — Catalog raisonné. https://arnaudquercy.art/en/catalogue-raisonne/AQC0781.html

[2] Quercy, A. (2025). Untitled - Gallery. https://artquamanima.com/en/artworks/2024/01/d-minor-research-on-harmony-variation-4_8ny.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)

ecc30af980c9ebd8132b03dd6f89db999e2c3f68d4b50e3d787aedb-ba5e47088

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