AQC0711

Nanopublication — Computational Image Analysis - AQC0711

by Arnaud Quercy · A Minor - Research on Harmony - Variation 3 · 2024

Claim 1: Computational Image Analysis - AQC0711

> K-means clustering analysis [3] (10 colors) performed on artwork A Minor [1] - Research on Harmony - Variation 3 (AQC0711) [2] by Arnaud Quercy [2] on 2025-12-04. 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]: 3024x4032 pixels. Analysis date: 2025-12-04.

COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		AC7940	15.7	orange	peru
2		D4B490	15.2	yellow-orange	tan
3		E1C6E0	13.8	red-violet	thistle
4		C7333D	13.0	red-orange	crimson
5		A42A47	10.6	red	brown
6		0F0B16	10.4	violet	black
7		DCB5C2	9.7	red	silver
8		2A2A3A	5.1	violet	very dark gray
9		D5A047	4.0	yellow-orange	goldenrod
10		CE687B	2.5	red	palevioletred
11		595633	0.3	yellow	dark brown [Accent]
12		474E67	0.3	blue-violet	grayish purple [Accent]

Color Families:

Family	%
red	22.8
yellow-orange	19.2
orange	15.7
violet	15.5
red-violet	13.8
red-orange	13.0
yellow	0.3
blue-violet	0.3

Accent Colors:

Hex	Family	Name	Chroma
595633	yellow	dark brown	21.6
474E67	blue-violet	grayish purple	16.5

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.249
Mean Local Roughness	0.017
Roughness Uniformity	0.019
Edge Density	0.054
Mean Gradient Magnitude	0.134
Gradient Variance	0.046
Gradient Smoothness	0.0
Directional Coherence	0.011
Pattern Complexity	0.119
Pattern Repetition	1.0
Detail Frequency Ratio	0.623
Spatial Variation	0.198
Texture Consistency	0.594

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.516
Brightness Variance	0.249
Brightness Uniformity	0.517
Brightness Skewness	-0.401
Brightness Entropy	7.494
Rms Contrast	0.249
Michelson Contrast	1.0
Weber Contrast	0.87
Mean Local Contrast	0.018
Contrast Uniformity	0.0
Dynamic Range	1.0
Effective Dynamic Range	0.788
Shadow Percentage	22.525
Midtone Percentage	38.486
Highlight Percentage	38.989
Shadow Clipping	0.007
Highlight Clipping	0.0
Tonal Balance	0.177
Fine Contrast	0.009
Medium Contrast	0.023
Coarse Contrast	0.033
Multiscale Contrast Ratio	0.282
Edge Contrast	0.134
Contrast Clustering	0.406

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.764
Color Clustering	0.698

Metric	Value
Color Transition Smoothness	0.662
Transition Uniformity	0.681
Sharp Transition Ratio	0.1
Transition Directionality	0.02
Mean Saturation	0.479
Saturation Variance	0.056
Low Saturation Ratio	0.299
Medium Saturation Ratio	0.462
High Saturation Ratio	0.239
Saturation Clustering	0.998
Hue Concentration	0.671
Complementary Balance	0.037
Analogous Dominance	0.809
Temperature Bias	0.766

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). A Minor - Research on Harmony - Variation 3 — Catalog raisonné. https://arnaudquercy.art/en/catalogue-raisonne/AQC0711.html

[2] Quercy, A. (2025). Untitled - Gallery. https://artquamanima.com/en/artworks/2024/01/a-minor-research-on-harmony-variation-3_7wq.html

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

601e512ba8c4c9bb66dad546bc6dd129c03b9a3b1662a85fd4a08cf35b-c92cf7

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