

Nanopublication – Computational Image Analysis – AQC0525

by Arnaud Quercy · D Major9 - Research on Harmony - Variation 5 · 2024



CLAIM 1: COMPUTATIONAL IMAGE ANALYSIS - AQC0525

Computational image analysis [3] of artwork D Major9 - Research [1] on Harmony - Variation 5 (AQC0525) [2] by Arnaud Quercy [2] using k-means clustering method with 10 color extraction parameters. Analysis includes color distribution, texture metrics, brightness/contrast measurements, and spatial pattern characterization. Analysis completed on 2026-02-04.

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]: 2624x3724 pixels. Analysis date: 2026-02-04.

COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		635E55	15.8	yellow-orange	dimgray
2		E0B537	14.3	yellow-orange	goldenrod
3		A3A06A	12.7	yellow	ochre
4		CD9D2E	11.6	yellow-orange	peru
5		302E2C	10.9	gray	very dark gray
6		474541	8.9	gray	darkslategray
7		B37628	8.0	orange	darkgoldenrod
8		E4D0AA	7.9	yellow-orange	wheat
9		C5B88A	7.0	yellow	tan
10		DCE6E2	3.1	white	white
11		200A03	0.3	red-orange	very dark gray [Accent]
12		B1C1C2	0.3	blue-green	silver [Accent]

Color Families:

Family	%
yellow-orange	49.5
gray	19.8
yellow	19.6
orange	8.0
white	3.1
red-orange	0.3
blue-green	0.3

Accent Colors:

Hex	Family	Name	Chroma
200A03	red-orange	very dark gray	10.0
B1C1C2	blue-green	silver	5.4

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.21
Mean Local Roughness	0.022
Roughness Uniformity	0.027
Edge Density	0.097
Mean Gradient Magnitude	0.183
Gradient Variance	0.071
Gradient Smoothness	0.0
Directional Coherence	0.006
Pattern Complexity	0.111
Pattern Repetition	1.0
Detail Frequency Ratio	0.64
Spatial Variation	0.139
Texture Consistency	0.697

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.537
Brightness Variance	0.21
Brightness Uniformity	0.608
Brightness Skewness	-0.264
Brightness Entropy	7.499
Rms Contrast	0.21
Michelson Contrast	1.0
Weber Contrast	0.721
Mean Local Contrast	0.024
Contrast Uniformity	0.0
Dynamic Range	1.0
Effective Dynamic Range	0.659
Shadow Percentage	20.563
Midtone Percentage	46.173
Highlight Percentage	33.264
Shadow Clipping	0.004
Highlight Clipping	0.043
Tonal Balance	0.171
Fine Contrast	0.011
Medium Contrast	0.03
Coarse Contrast	0.048
Multiscale Contrast Ratio	0.236
Edge Contrast	0.183
Contrast Clustering	0.303

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.689
Color Clustering	0.645
Color Transition Smoothness	0.537
Transition Uniformity	0.545
Sharp Transition Ratio	0.1
Transition Directionality	0.007
Mean Saturation	0.386
Saturation Variance	0.089
Low Saturation Ratio	0.496
Medium Saturation Ratio	0.215
High Saturation Ratio	0.289
Saturation Clustering	0.999
Hue Concentration	0.984
Complementary Balance	0.0
Analogous Dominance	0.999
Temperature Bias	0.885

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 Major9 - Research on Harmony - Variation 5 - Catalog raisonn  . <https://arnaudquercy.art/en/catalogue-raisonne/AQC0525.html>

[2] Quercy, A. (2024). D Major9 - Research on Harmony - Variation 5 - Gallery. https://artquamanima.com/en/art-works/2024/01/d-major9-research-on-harmony-variation-5_5we.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>

WHERE THIS WORK LIVES

THEMATIC ELEMENTS

chromesthetic mapping

D Major9 chord

synesthetic art

harmonic visualization

color-pitch relationships

yellow-orange composition

acrylic on paper

Synesthetic Explorations

EPISTEMIC PROFILE

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

CHECKSUM (SHA-256)

2f31993c55d1b2006d5081228973cbc781bafc6b8bac3b4b18c7544df21aad04

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