

Nanopublication – Computational Image Analysis –
AQC0551

by Arnaud Quercy · C Major9 - Research on Harmony - Variation 3 · 2024



CLAIM 1: COMPUTATIONAL IMAGE ANALYSIS - AQC0551

K-means clustering analysis [3] (10 colors) performed on artwork C Major9 - Research [1] on Harmony - Variation 3 (AQC0551) [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]: 3024x4032 pixels. Analysis date: 2026-02-04.

COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		DFD2C4	15.1	yellow-orange	lightgray
2		413C29	14.6	yellow-orange	darkslategray
3		DEAD9F	14.3	red-orange	tan
4		D38C76	11.3	red-orange	darksalmon
5		292E3E	10.3	blue-violet	very dark gray
6		AF7F1C	9.4	yellow-orange	darkgoldenrod
7		B68C55	8.5	yellow-orange	peru
8		555144	7.8	yellow	dark brown
9		D19F35	5.5	yellow-orange	goldenrod
10		797266	3.1	yellow-orange	dimgray
11		875E38	0.3	orange	burnt sienna [Accent]
12		ADBEB5	0.3	yellow-green	silver [Accent]
13		AABCBD	0.3	blue-green	silver [Accent]
14		B3C1BD	0.3	green	silver [Accent]

Color Families:

Family	%
yellow-orange	56.3
red-orange	25.7
blue-violet	10.3
yellow	7.8
orange	0.3
yellow-green	0.3
blue-green	0.3
green	0.3

Accent Colors:

Hex	Family	Name	Chroma
875E38	orange	burnt sienna	30.5
ADBEB5	yellow-green	silver	8.5
AABCBD	blue-green	silver	6.7
B3C1BD	green	silver	6.0

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.229
Mean Local Roughness	0.021
Roughness Uniformity	0.019
Edge Density	0.109
Mean Gradient Magnitude	0.196
Gradient Variance	0.043
Gradient Smoothness	0.0
Directional Coherence	0.015
Pattern Complexity	0.11
Pattern Repetition	1.0
Detail Frequency Ratio	0.622
Spatial Variation	0.189
Texture Consistency	0.43

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.527
Brightness Variance	0.229
Brightness Uniformity	0.566
Brightness Skewness	-0.206
Brightness Entropy	7.496
Rms Contrast	0.229
Michelson Contrast	1.0
Weber Contrast	0.751
Mean Local Contrast	0.025
Contrast Uniformity	0.207
Dynamic Range	1.0
Effective Dynamic Range	0.675
Shadow Percentage	29.861
Midtone Percentage	37.941
Highlight Percentage	32.198
Shadow Clipping	0.0
Highlight Clipping	0.002
Tonal Balance	0.234
Fine Contrast	0.011
Medium Contrast	0.031
Coarse Contrast	0.053
Multiscale Contrast Ratio	0.206
Edge Contrast	0.196
Contrast Clustering	0.57

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.775
Color Clustering	0.634
Color Transition Smoothness	0.494
Transition Uniformity	0.713
Sharp Transition Ratio	0.1
Transition Directionality	0.014
Mean Saturation	0.393
Saturation Variance	0.049
Low Saturation Ratio	0.389
Medium Saturation Ratio	0.475
High Saturation Ratio	0.136
Saturation Clustering	0.999
Hue Concentration	0.698
Complementary Balance	0.137
Analogous Dominance	0.863
Temperature Bias	0.714

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). C Major9 - Research on Harmony - Variation 3 - Catalog raisonn  . <https://arnaudquercy.art/en/catalogue-raisonne/AQC0551.html>

[2] Quercy, A. (2024). C Major9 - Research on Harmony - Variation 3 - Gallery. https://artquamanima.com/en/art-works/2024/01/c-major9-research-on-harmony-variation-3_66i.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

synesthetic art

C Major9 chord

circle of fifths

acrylic painting

harmonic visualization

jazz harmony

color theory

contemporary art

Synesthetic Explorations

EPISTEMIC PROFILE

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

CHECKSUM (SHA-256)

babd2ac90560802981677518ce641670085cf07aeb32a163df44b884a22a8dff

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