

Nanopublication – Computational Image Analysis – AQC0828

by Arnaud Quercy · F Major – Research on Harmony – Variation 7 · 2025



CLAIM 1: COMPUTATIONAL IMAGE ANALYSIS – AQC0828

K-means clustering (10 colors) performed on artwork F Major – Research on Harmony – Variation 7 (AQC0828) [1] by Arnaud Quercy [2] on 2025-10-03, according to IDS-CMP-2025 [3]. Documentation includes: color families, texture roughness, brightness distribution, spatial coherence.

CONTEXT

Analysis performed according to IDS-CMP-2025 [3] includes four metric categories: (a) Color distribution via k-means (10 colors), (b) Texture analysis using Haralick features, (c) Brightness and contrast measurements, (d) Spatial pattern characterization. Source image: 2096x2794 pixels. Analysis date: 2025-10-03.

A) COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		DECEB5	18.0	yellow-orange	wheat
2		D4BEA0	17.7	yellow-orange	tan
3		C4AA8D	11.9	orange	rosybrown
4		1A1F26	10.6	blue-violet	very dark gray
5		C5D9E0	10.4	blue	lightgray
6		E8DFCF	10.4	yellow-orange	gainsboro
7		B59473	7.3	orange	ochre
8		2D323A	7.2	blue-violet	grayish purple
9		8C7777	3.5	red-orange	gray
10		574C5D	3.0	red-violet	dusty mauve
11		8C77A4	0.3	violet	dusty mauve [Accent]

Color Families:

Family	%
yellow-orange	46.1
orange	19.2
blue-violet	17.8
blue	10.4
red-orange	3.5
red-violet	3.0
violet	0.3

Accent Colors:

Hex	Family	Name	Chroma
8C77A4	violet	dusty mauve	27.0

B) TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.257
Mean Local Roughness	0.016
Roughness Uniformity	0.015
Edge Density	0.086
Mean Gradient Magnitude	0.155
Gradient Variance	0.033
Gradient Smoothness	0.0
Directional Coherence	0.018
Pattern Complexity	0.118
Pattern Repetition	1.0
Detail Frequency Ratio	0.599
Spatial Variation	0.21
Texture Consistency	0.502

C) BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.639
Brightness Variance	0.257
Brightness Uniformity	0.598
Brightness Skewness	-1.107
Brightness Entropy	7.18
Rms Contrast	0.257
Michelson Contrast	1.0
Weber Contrast	0.822
Mean Local Contrast	0.019
Contrast Uniformity	0.137
Dynamic Range	1.0
Effective Dynamic Range	0.761
Shadow Percentage	19.667
Midtone Percentage	14.607
Highlight Percentage	65.726
Shadow Clipping	0.001
Highlight Clipping	0.0
Tonal Balance	0.0
Fine Contrast	0.008
Medium Contrast	0.023
Coarse Contrast	0.04
Multiscale Contrast Ratio	0.202
Edge Contrast	0.155
Contrast Clustering	0.498

D) SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.745
Color Clustering	0.922
Color Transition Smoothness	0.608
Transition Uniformity	0.783
Sharp Transition Ratio	0.1
Transition Directionality	0.022
Mean Saturation	0.227
Saturation Variance	0.011
Low Saturation Ratio	0.77
Medium Saturation Ratio	0.229
High Saturation Ratio	0.001
Saturation Clustering	1.0
Hue Concentration	0.472
Complementary Balance	0.19
Analogous Dominance	0.721
Temperature Bias	0.491

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 Ideamorphic Studies' computational imaging systems.

REFERENCES

[1] Quercy, A. (2025). F Major - Research on Harmony - Variation 7 - Catalogue Raisonné. <https://arnaudquercy.art/en/catalogue-raisonne/AQC0828.html>

[2] Quercy, A. (2025). ORCID <https://orcid.org/0009-0000-2662-7790>

[3] Quercy, A. (2026). Computational Image Analysis Standard. <https://ideamorphism.org/en/measurements/2025/09/ids-cmp-2025-computational-image-analysis-standard-5dq9.html>

EPISTEMIC PROFILE

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

CHECKSUM (SHA-256)

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