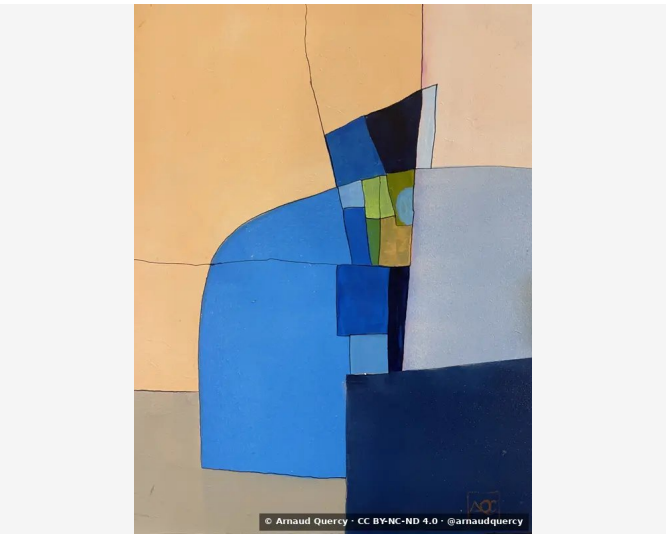
AQC0732 | NAN-COL000222

Nanopublication — Computational Image Analysis - AQC0732

by Arnaud Quercy · E Major - Research on Harmony - Variation 3 · 2024



CLAIM 1: COMPUTATIONAL IMAGE ANALYSIS - AQC0732

K-means clustering (10 colors) performed on artwork E Major - Research on Harmony - Variation 3 (AQC0732) [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: 3024x4032 pixels. Analysis date: 2025-10-03.

A) COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		E6B77F	27.5	orange	burlywood
2		3883D3	18.2	blue-violet	royalblue
3		10234B	14.8	violet	very dark purple
4		9EA9B9	12.0	blue-violet	steel gray
5		E2C09F	10.3	orange	tan
6		AD9F8B	8.9	yellow-orange	rosybrown
7		124797	3.6	violet	darkslateblue
8		141324	2.6	violet	very dark gray
9		948E4B	1.2	yellow	olivedrab
10		575E29	0.8	yellow-green	dark brown
11		6590A4	0.3	blue	cadetblue [Accent]
12		522D2E	0.3	red-orange	darkslategray [Accent]
13		483637	0.3	red	darkslategray [Accent]
14		406D63	0.3	green	seagreen [Accent]
15		3D3138	0.3	red-violet	dusty mauve [Accent]

Color Families:

Family	%
orange	37.9
blue-violet	30.2
violet	21.0
yellow-orange	8.9
yellow	1.2
yellow-green	0.8
blue	0.3
red-orange	0.3
red	0.3
green	0.3
red-violet	0.3

Accent Colors:

Hex	Family	Name	Chroma
6590A4	blue	cadetblue	17.5
522D2E	red-orange	darkslategray	18.4
483637	red	darkslategray	8.2
406D63	green	seagreen	18.0
3D3138	red-violet	dusty mauve	7.3

B) TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.235
Mean Local Roughness	0.007
Roughness Uniformity	0.008
Edge Density	0.005
Mean Gradient Magnitude	0.055
Gradient Variance	0.01
Gradient Smoothness	0.0
Directional Coherence	0.083
Pattern Complexity	0.117
Pattern Repetition	1.0
Detail Frequency Ratio	0.586
Spatial Variation	0.193
Texture Consistency	0.307

C) BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.548
Brightness Variance	0.235
Brightness Uniformity	0.572
Brightness Skewness	-0.797
Brightness Entropy	6.832
Rms Contrast	0.235
Michelson Contrast	1.0
Weber Contrast	0.827
Mean Local Contrast	0.007
Contrast Uniformity	0.0
Dynamic Range	1.0
Effective Dynamic Range	0.667
Shadow Percentage	21.103
Midtone Percentage	35.402
Highlight Percentage	43.494
Shadow Clipping	0.0
Highlight Clipping	0.0
Tonal Balance	0.0
Fine Contrast	0.004
Medium Contrast	0.009
Coarse Contrast	None
Multiscale Contrast Ratio	1.0
Edge Contrast	0.055
Contrast Clustering	0.693

D) SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.819
Color Clustering	0.64
Color Transition Smoothness	0.849
Transition Uniformity	0.927
Sharp Transition Ratio	0.1
Transition Directionality	0.111
Mean Saturation	0.496
Saturation Variance	0.06
Low Saturation Ratio	0.291
Medium Saturation Ratio	0.371
High Saturation Ratio	0.339
Saturation Clustering	1.0
Hue Concentration	0.077
Complementary Balance	0.327
Analogous Dominance	0.53
Temperature Bias	0.071

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. (2024). E Major - Research on Harmony - Variation 3 - Catalogue Raisonné. https://arnaudquercy.art/en/catalogue-raisonne/AQC0732.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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