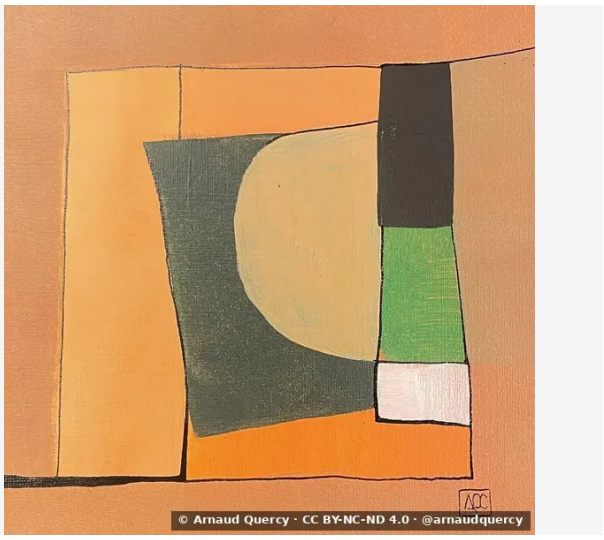
AQC0904 | NAN-COL000057

Nanopublication — Computational Image Analysis - AQC0904

by Arnaud Quercy · D Major - Research on Harmony - Variations 15 · 2025



CLAIM 1: COMPUTATIONAL IMAGE ANALYSIS - AQC0904

K-means clustering analysis [3] (10 colors) performed on artwork D Major [1] - Research on Harmony - Variations 15 (AQC0904) [2] by Arnaud Quercy [2] on 2025-12-11. 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]: 1995x1995 pixels. Analysis date: 2025-12-11.

COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		EDA45A	18.9	orange	sandybrown
2		D99B6B	18.0	orange	darksalmon
3		D48D59	17.7	orange	peru
4		E3B176	17.3	orange	burlywood
5		4F493B	8.5	yellow	dark brown
6		6B6B54	6.5	yellow	dimgray
7		EF862C	5.1	orange	goldenrod
8		849F65	4.6	yellow-green	gray
9		F0D9C9	2.0	orange	bisque
10		341A0C	1.4	orange	very dark orange
11		692921	0.3	red-orange	russet [Accent]
12		FDF6E8	0.3	yellow-orange	white [Accent]

Color Families:

Family	%
orange	80.4
yellow	15.1
yellow-green	4.6
red-orange	0.3
yellow-orange	0.3

Accent Colors:

Hex	Family	Name	Chroma
692921	red-orange	russet	34.4
FDF6E8	yellow-orange	white	8.0

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.147
Mean Local Roughness	0.026
Roughness Uniformity	0.029
Edge Density	0.112
Mean Gradient Magnitude	0.197
Gradient Variance	0.078
Gradient Smoothness	0.0
Directional Coherence	0.025
Pattern Complexity	0.121
Pattern Repetition	1.0
Detail Frequency Ratio	0.663
Spatial Variation	0.06
Texture Consistency	0.637

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.613
Brightness Variance	0.147
Brightness Uniformity	0.76
Brightness Skewness	-1.44
Brightness Entropy	6.668
Rms Contrast	0.147
Michelson Contrast	1.0
Weber Contrast	0.524
Mean Local Contrast	0.028
Contrast Uniformity	0.0
Dynamic Range	1.0
Effective Dynamic Range	0.478
Shadow Percentage	8.969
Midtone Percentage	45.309
Highlight Percentage	45.722
Shadow Clipping	0.0
Highlight Clipping	0.0
Tonal Balance	0.0
Fine Contrast	0.014
Medium Contrast	0.034
Coarse Contrast	0.044
Multiscale Contrast Ratio	0.314
Edge Contrast	0.197
Contrast Clustering	0.363

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.746
Color Clustering	0.407
Color Transition Smoothness	0.502
Transition Uniformity	0.474
Sharp Transition Ratio	0.1
Transition Directionality	0.034
Mean Saturation	0.501
Saturation Variance	0.028
Low Saturation Ratio	0.167
Medium Saturation Ratio	0.77
High Saturation Ratio	0.063
Saturation Clustering	0.999
Hue Concentration	0.969
Complementary Balance	0.0
Analogous Dominance	0.993
Temperature Bias	0.943

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 (2025). D Major - Research on Harmony - Variations 15 — Catalog raisonné. https://arnaudquercy.art/en/catalogue-raisonne/AQC0904.html

[2] Quercy, A. (2025). Untitled - Gallery. https://artquamanima.com/en/artworks/2025/11/d-major-research-on-harmony-variations-15_ibs.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 Major harmony · synesthetic art · geometric abstraction · acrylic painting · musical visualization · harmonic translation · contemporary painting

EPISTEMIC PROFILE

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

CHECKSUM (SHA-256)

4f89397a461de6260e6b7c69370faf54257c7c51ff4c4238f25a7d0659765bad

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