

Nanopublication – Computational Image Analysis – AQC0921

by Arnaud Quercy · B Major – Research on Harmony – Variations 10 · 2025



CLAIM 1: COMPUTATIONAL IMAGE ANALYSIS – AQC0921

K-means clustering (10 colors) performed on artwork B Major – Research on Harmony – Variations 10 (AQC0921) [1] by Arnaud Quercy [2] on 2025-12-11, 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: 2033x2033 pixels. Analysis date: 2025-12-11.

A) COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		9AAAE2	24.8	blue-violet	lightsteelblue
2		5A5A50	18.8	yellow	dimgray
3		C8E070	12.2	yellow-green	ochre
4		B0BFF2	8.9	blue-violet	lightblue
5		5FB06D	8.2	yellow-green	mediumseagreen
6		ACC344	7.1	yellow-green	yellowgreen
7		788274	7.0	yellow-green	gray
8		95A692	6.2	yellow-green	darkseagreen
9		E8EAE2	5.8	white	white
10		212B24	1.1	yellow-green	very dark gray
11		4E4F77	0.3	violet	dusty mauve [Accent]
12		B4C4C3	0.3	green	silver [Accent]

Color Families:

Family	%
yellow-green	41.8
blue-violet	33.7
yellow	18.8
white	5.8
violet	0.3
green	0.3

Accent Colors:

Hex	Family	Name	Chroma
4E4F77	violet	dusty mauve	25.1
B4C4C3	green	silver	6.1

B) TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.176
Mean Local Roughness	0.03
Roughness Uniformity	0.024
Edge Density	0.181
Mean Gradient Magnitude	0.226
Gradient Variance	0.063
Gradient Smoothness	0.0
Directional Coherence	0.01
Pattern Complexity	0.114
Pattern Repetition	1.0
Detail Frequency Ratio	0.657
Spatial Variation	0.115
Texture Consistency	0.561

C) BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.621
Brightness Variance	0.176
Brightness Uniformity	0.717
Brightness Skewness	-0.489
Brightness Entropy	7.261
Rms Contrast	0.176
Michelson Contrast	1.0
Weber Contrast	0.578
Mean Local Contrast	0.033
Contrast Uniformity	0.24
Dynamic Range	1.0
Effective Dynamic Range	0.561
Shadow Percentage	6.95
Midtone Percentage	42.91
Highlight Percentage	50.14
Shadow Clipping	0.001
Highlight Clipping	0.014
Tonal Balance	0.0
Fine Contrast	0.016
Medium Contrast	0.039
Coarse Contrast	0.049
Multiscale Contrast Ratio	0.325
Edge Contrast	0.226
Contrast Clustering	0.439

D) SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.782
Color Clustering	0.643
Color Transition Smoothness	0.434
Transition Uniformity	0.586
Sharp Transition Ratio	0.1
Transition Directionality	0.012
Mean Saturation	0.294
Saturation Variance	0.034
Low Saturation Ratio	0.485
Medium Saturation Ratio	0.491
High Saturation Ratio	0.024
Saturation Clustering	0.999
Hue Concentration	0.362
Complementary Balance	0.0
Analogous Dominance	0.535
Temperature Bias	-0.675

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). B Major - Research on Harmony - Variations 10 - Catalogue Raisonné. <https://arnaudquercy.art/en/catalogue-raisonne/AQC0921.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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