AQC0678

Nanopublication — Computational Image Analysis - AQC0678

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

Claim 1: Computational Image Analysis - AQC0678

> K-means clustering analysis [3] (10 colors) performed on artwork C# minor - Research [1] on Harmony - Variation 3 (AQC0678) [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]: 2268x3402 pixels. Analysis date: 2026-02-04.

COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		C0C7C0	24.2	yellow-green	silver
2		D4D4CE	22.1	white	lightgray
3		A9BBB1	14.8	yellow-green	steel gray
4		8FAB9D	10.5	yellow-green	darkseagreen
5		789385	7.8	yellow-green	gray
6		62776B	7.7	yellow-green	dimgray
7		4D5C51	5.7	yellow-green	darkslategray
8		E1AE3C	3.3	yellow-orange	goldenrod
9		A88134	2.0	yellow-orange	peru
10		2C2D26	1.9	gray	very dark gray
11		F9ECE4	0.3	orange	white [Accent]
12		B9AC6A	0.3	yellow	ochre [Accent]

Color Families:

Family	%
yellow-green	70.7
white	22.1
yellow-orange	5.3
gray	1.9
orange	0.3
yellow	0.3

Accent Colors:

Hex	Family	Name	Chroma
F9ECE4	orange	white	5.8
B9AC6A	yellow	ochre	36.3

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.162
Mean Local Roughness	0.013
Roughness Uniformity	0.017
Edge Density	0.043
Mean Gradient Magnitude	0.113
Gradient Variance	0.034
Gradient Smoothness	0.0
Directional Coherence	0.033
Pattern Complexity	0.116
Pattern Repetition	1.0
Detail Frequency Ratio	0.604
Spatial Variation	0.122
Texture Consistency	0.609

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.674
Brightness Variance	0.162
Brightness Uniformity	0.76
Brightness Skewness	-1.185
Brightness Entropy	6.99
Rms Contrast	0.162
Michelson Contrast	1.0
Weber Contrast	0.495
Mean Local Contrast	0.014
Contrast Uniformity	0.0
Dynamic Range	1.0
Effective Dynamic Range	0.494
Shadow Percentage	4.109
Midtone Percentage	30.756
Highlight Percentage	65.135
Shadow Clipping	0.003
Highlight Clipping	0.0
Tonal Balance	0.0
Fine Contrast	0.007
Medium Contrast	0.018
Coarse Contrast	0.031
Multiscale Contrast Ratio	0.23
Edge Contrast	0.113
Contrast Clustering	0.391

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.752
Color Clustering	0.445
Color Transition Smoothness	0.709
Transition Uniformity	0.763

Metric	Value
Sharp Transition Ratio	0.1
Transition Directionality	0.04
Mean Saturation	0.141
Saturation Variance	0.028
Low Saturation Ratio	0.898
Medium Saturation Ratio	0.069
High Saturation Ratio	0.033
Saturation Clustering	1.0
Hue Concentration	0.601
Complementary Balance	0.003
Analogous Dominance	0.647
Temperature Bias	-0.308

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# minor - Research on Harmony - Variation 3 — Catalog raisonné. https://arnaudquercy.art/en/catalogue-raisonne/AQC0678.html

[2] Quercy, A. (2024). C# minor - Research on Harmony - Variation 3 - Gallery. https://artquamanima.com/en/artworks/2024/01/c-minor-research-on-harmony-variation-3_7jw.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

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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