AQC0637

Nanopublication — Computational Image Analysis - AQC0637

by Arnaud Quercy · F# Major - Research on Harmony - Variation 1 · 2024

Claim 1: Computational Image Analysis - AQC0637

> K-means clustering analysis [3] (10 colors) performed on artwork F# Major [1] - Research on Harmony - Variation 1 (AQC0637) [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]: 2277x3415 pixels. Analysis date: 2026-02-04.

COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		2E664E	21.1	yellow-green	darkslategray
2		573E3D	13.7	red-orange	darkslategrey
3		53806F	12.8	green	dimgray
4		7FC552	10.1	yellow-green	yellowgreen
5		75C3B2	9.6	green	mediumaquamarine
6		705A55	9.4	red-orange	dimgrey
7		1A1910	7.9	yellow	black
8		9DDE6B	6.1	yellow-green	lightgreen
9		DBD9CA	5.1	yellow	lightgray
10		A08A76	4.1	orange	gray
11		FAF4E6	0.3	yellow-orange	white [Accent]

Color Families:

Family	%
yellow-green	37.4
red-orange	23.1
green	22.5
yellow	13.0
orange	4.1
yellow-orange	0.3

Accent Colors:

Hex	Family	Name	Chroma
FAF4E6	yellow-orange	white	7.0

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.208
Mean Local Roughness	0.041
Roughness Uniformity	0.041
Edge Density	0.178
Mean Gradient Magnitude	0.318
Gradient Variance	0.178
Gradient Smoothness	0.0
Directional Coherence	0.016
Pattern Complexity	0.121
Pattern Repetition	1.0
Detail Frequency Ratio	0.644
Spatial Variation	0.122
Texture Consistency	0.614

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.448
Brightness Variance	0.208
Brightness Uniformity	0.535
Brightness Skewness	0.289
Brightness Entropy	7.526
Rms Contrast	0.208
Michelson Contrast	1.0
Weber Contrast	0.686
Mean Local Contrast	0.043
Contrast Uniformity	0.081
Dynamic Range	1.0
Effective Dynamic Range	0.69
Shadow Percentage	33.662
Midtone Percentage	46.368
Highlight Percentage	19.971
Shadow Clipping	0.129
Highlight Clipping	0.054
Tonal Balance	0.144
Fine Contrast	0.023
Medium Contrast	0.056
Coarse Contrast	0.086
Multiscale Contrast Ratio	0.268
Edge Contrast	0.318
Contrast Clustering	0.386

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.762
Color Clustering	0.574
Color Transition Smoothness	0.175
Transition Uniformity	0.0
Sharp Transition Ratio	0.1
Transition Directionality	0.018

Metric	Value
Mean Saturation	0.418
Saturation Variance	0.031
Low Saturation Ratio	0.271
Medium Saturation Ratio	0.696
High Saturation Ratio	0.033
Saturation Clustering	0.996
Hue Concentration	0.437
Complementary Balance	0.127
Analogous Dominance	0.509
Temperature Bias	-0.181

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). F# Major - Research on Harmony - Variation 1 — Catalog raisonné. https://arnaudquercy.art/en/catalogue-raisonne/AQC0637.html

[2] Quercy, A. (2024). F# Major - Research on Harmony - Variation 1 - Gallery. https://artquamanima.com/en/artworks/2024/01/f-major-research-on-harmony-variation-1_73y.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)

7c3f1077f7df0f7b48d9fffa3c81942d554eb37ff6a26ea6f193d-dc49e839b9c

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