AQC0706

Nanopublication — Computational Image Analysis - AQC0706

by Arnaud Quercy · F# Minor - Research on Harmony - Variation 3 · 2024

Claim 1: Computational Image Analysis - AQC0706

> K-means clustering analysis [3] (10 colors) performed on artwork F# Minor [1] - Research on Harmony - Variation 3 (AQC0706) [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]: 1446x2025 pixels. Analysis date: 2026-02-04.

COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		3E3D31	20.7	yellow	darkslategray
2		466B58	15.5	yellow-green	darkslategrey
3		AEB13E	14.3	yellow	yellowgreen
4		66A09C	13.0	green	cadetblue
5		D1B782	10.3	yellow-orange	tan
6		868E3B	9.8	yellow	olivedrab
7		ED9E7F	7.9	orange	darksalmon
8		7C866E	4.5	yellow-green	gray
9		EC9B2B	3.3	orange	goldenrod
10		F3E4C5	0.9	yellow-orange	bisque
11		4F7B85	0.3	blue-green	blue gray [Accent]

Color Families:

Family	%
yellow	44.7
yellow-green	19.9
green	13.0
yellow-orange	11.2
orange	11.1
blue-green	0.3

Accent Colors:

Hex	Family	Name	Chroma
4F7B85	blue-green	blue gray	15.6

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.18
Mean Local Roughness	0.009
Roughness Uniformity	0.024
Edge Density	0.016
Mean Gradient Magnitude	0.062
Gradient Variance	0.049
Gradient Smoothness	0.0
Directional Coherence	0.288
Pattern Complexity	0.096
Pattern Repetition	1.0
Detail Frequency Ratio	0.64
Spatial Variation	0.109
Texture Consistency	0.67

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.503
Brightness Variance	0.18
Brightness Uniformity	0.642
Brightness Skewness	-0.248
Brightness Entropy	7.062
Rms Contrast	0.18
Michelson Contrast	1.0
Weber Contrast	0.689
Mean Local Contrast	0.009
Contrast Uniformity	0.0
Dynamic Range	1.0
Effective Dynamic Range	0.533
Shadow Percentage	21.297
Midtone Percentage	56.322
Highlight Percentage	22.381
Shadow Clipping	0.001
Highlight Clipping	0.0
Tonal Balance	0.0
Fine Contrast	0.005
Medium Contrast	0.012
Coarse Contrast	None
Multiscale Contrast Ratio	1.0
Edge Contrast	0.062
Contrast Clustering	0.33

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.76
Color Clustering	0.423
Color Transition Smoothness	0.825
Transition Uniformity	0.665
Sharp Transition Ratio	0.1
Transition Directionality	0.288

Metric	Value
Mean Saturation	0.416
Saturation Variance	0.037
Low Saturation Ratio	0.244
Medium Saturation Ratio	0.712
High Saturation Ratio	0.044
Saturation Clustering	0.999
Hue Concentration	0.598
Complementary Balance	0.006
Analogous Dominance	0.676
Temperature Bias	0.058

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# Minor - Research on Harmony - Variation 3 — Catalog raisonné. https://arnaudquercy.art/en/catalogue-raisonne/AQC0706.html

[2] Quercy, A. (2024). F# Minor - Research on Harmony - Variation 3 - Gallery. https://artquamanima.com/en/artworks/2024/01/f-minor-research-on-harmony-variation-3_7us.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)

8c5ab11130beade43d30fa2170-ab543592386a050b70ec064d407b672b252201

Artist	Arnaud Quercy
Date	2024
Collection	Synesthetic Explorations
Certificate	20240718-0202
Asset code	AQC0706
Version	1
Published	2026-02-03

Published by: Art Quam Anima Publishing New York LLC — publishing.artquamanima.com

Date of publication: 2026-04-20

Persistent URI: https://multimodal.institute/en/nanopubs/2026/02/AQC0706-computational-image-analysis-aqc0706.pdf