

Nanopublication – Computational Image Analysis – AQC0703

by Arnaud Quercy · F Minor – Research on Harmony – Variation 8 · 2024



CLAIM 1: COMPUTATIONAL IMAGE ANALYSIS – AQC0703

Computational image analysis of artwork F Minor – Research on Harmony – Variation 8 (AQC0703) ^[1] by Arnaud Quercy ^[2], performed according to IDS-CMP-2025 ^[3], using k-means clustering method with 10 color extraction parameters. Analysis includes color distribution, texture metrics, brightness/contrast measurements, and spatial pattern characterization. Analysis completed on 2025-10-03.

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: 2480x2480 pixels. Analysis date: 2025-10-03.

A) COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		E63F31	24.2	red-orange	crimson
2		E0AF7F	23.6	orange	burlywood
3		3A2D2A	13.4	red-orange	darkslategray
4		504140	10.3	red-orange	darkslategrey
5		773C3A	8.2	red-orange	russet
6		806873	4.8	red-violet	dusty mauve
7		B4696F	4.8	red-orange	indianred
8		AE3B39	4.4	red-orange	brown
9		E96953	3.8	red-orange	tomato
10		4B4D6C	2.5	violet	dusty mauve
11		667F8E	0.3	blue	blue gray [Accent]
12		D496A2	0.3	red	rosybrown [Accent]
13		EBCEAF	0.3	yellow-orange	wheat [Accent]
14		2B3759	0.3	blue-violet	grayish purple [Accent]

Color Families:

Family	%
red-orange	69.1
orange	23.6
red-violet	4.8
violet	2.5
blue	0.3
red	0.3
yellow-orange	0.3
blue-violet	0.3

Accent Colors:

Hex	Family	Name	Chroma
667F8E	blue	blue gray	12.1
D496A2	red	rosybrown	25.2
EBCEAF	yellow-orange	wheat	19.6
2B3759	blue-violet	grayish purple	22.6

B) TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.185
Mean Local Roughness	0.01
Roughness Uniformity	0.022
Edge Density	0.021
Mean Gradient Magnitude	0.076
Gradient Variance	0.041
Gradient Smoothness	0.0
Directional Coherence	0.182
Pattern Complexity	0.113
Pattern Repetition	1.0
Detail Frequency Ratio	0.633
Spatial Variation	0.09
Texture Consistency	0.591

C) BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.447
Brightness Variance	0.185
Brightness Uniformity	0.587
Brightness Skewness	0.348
Brightness Entropy	6.995
Rms Contrast	0.185
Michelson Contrast	1.0
Weber Contrast	0.706
Mean Local Contrast	0.011
Contrast Uniformity	0.0
Dynamic Range	0.996
Effective Dynamic Range	0.576
Shadow Percentage	32.195
Midtone Percentage	44.883
Highlight Percentage	22.921
Shadow Clipping	0.001
Highlight Clipping	0.0
Tonal Balance	0.0
Fine Contrast	0.006
Medium Contrast	0.014
Coarse Contrast	None
Multiscale Contrast Ratio	1.0
Edge Contrast	0.076
Contrast Clustering	0.409

D) SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.732
Color Clustering	0.562
Color Transition Smoothness	0.793
Transition Uniformity	0.726
Sharp Transition Ratio	0.1
Transition Directionality	0.206
Mean Saturation	0.489
Saturation Variance	0.049
Low Saturation Ratio	0.211
Medium Saturation Ratio	0.522
High Saturation Ratio	0.266
Saturation Clustering	0.999
Hue Concentration	0.912
Complementary Balance	0.008
Analogous Dominance	0.962
Temperature Bias	0.942

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. (2024). F Minor - Research on Harmony - Variation 8 - Catalogue Raisonné. <https://arnaudquercy.art/en/catalogue-raisonne/AQC0703.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)

72629aace32ec4c375c48250f562ec7892d98fecd631369a261721e10ded771c

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