

Nanopublication — Computational Image Analysis - AQC0936

by Arnaud Quercy · F Minor - Research on Harmony - Variations 22 · 2025



Claim 1: Computational Image Analysis - AQC0936

K-means clustering analysis [3] (10 colors) performed on artwork F Minor [1] - Research on Harmony - Variations 22 (AQC0936) [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]: 1832x2564 pixels. Analysis date: 2026-02-04.

COLOR ANALYSIS

Rank	Color Hex	%	Family	Name
1	067FCD	20.4	blue-violet	dodgerblue
2	F8480D	14.5	orange	orangered
3	BB7177	14.1	red-orange	rosybrown
4	171424	11.3	violet	very dark gray
5	2D64B6	10.1	blue-violet	steelblue
6	9B625C	10.0	red-orange	burnt sienna
7	E5B8BE	6.1	red	lightpink
8	2A4A8B	6.0	violet	darkslateblue
9	6B181C	4.8	red-orange	maroon
10	ECE9E2	2.8	white	white
11	93711A	0.3	yellow-orange	olive [Accent]
12	308DBD	0.3	blue	grayish purple [Accent]
13	596C6F	0.3	blue-green	dimgray [Accent]
14	4B3D45	0.3	red-violet	dusty mauve [Accent]

Color Families:

Family	%
blue-violet	30.5
red-orange	28.8
violet	17.2
orange	14.5
red	6.1
white	2.8
yellow-orange	0.3
blue	0.3
blue-green	0.3
red-violet	0.3

Accent Colors:

Hex	Family	Name	Chroma
93711A	yellow-orange	olive	49.3
308DBD	blue	grayish purple	34.8
596C6F	blue-green	dimgray	8.1
4B3D45	red-violet	dusty mauve	8.5

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.188
Mean Local Roughness	0.017
Roughness Uniformity	0.018
Edge Density	0.043
Mean Gradient Magnitude	0.139
Gradient Variance	0.049
Gradient Smoothness	0.0
Directional Coherence	0.004
Pattern Complexity	0.121
Pattern Repetition	1.0
Detail Frequency Ratio	0.615
Spatial Variation	0.103
Texture Consistency	0.691

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.415
Brightness Variance	0.188
Brightness Uniformity	0.548
Brightness Skewness	0.357
Brightness Entropy	7.269
Rms Contrast	0.188
Michelson Contrast	1.0
Weber Contrast	0.758
Mean Local Contrast	0.018

Metric	Value
Contrast Uniformity	0.0
Dynamic Range	1.0
Effective Dynamic Range	0.722
Shadow Percentage	23.941
Midtone Percentage	67.07
Highlight Percentage	8.989
Shadow Clipping	0.0
Highlight Clipping	0.0
Tonal Balance	0.0
Fine Contrast	0.01
Medium Contrast	0.024
Coarse Contrast	0.038
Multiscale Contrast Ratio	0.253
Edge Contrast	0.139
Contrast Clustering	0.309

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.757
Color Clustering	0.454
Color Transition Smoothness	0.629
Transition Uniformity	0.652
Sharp Transition Ratio	0.1
Transition Directionality	0.006
Mean Saturation	0.673
Saturation Variance	0.083
Low Saturation Ratio	0.113
Medium Saturation Ratio	0.333
High Saturation Ratio	0.554
Saturation Clustering	0.999
Hue Concentration	0.278
Complementary Balance	0.006
Analogous Dominance	0.527
Temperature Bias	0.098

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 (2025). F Minor - Research on Harmony - Variations 22 — Catalog raisonné. <https://arnaudquercy.art/en/catalogue-raisonne/AQC0936.html>
<https://arnaudquercy.art/fr/catalogue-raisonne/AQC0936.html>
- [2] Quercy, A. (2025). F Minor - Research on Harmony - Variations 22 - Gallery. https://artquamanima.com/en/artworks/2025/12/f-minor-research-on-harmony-variations-22_li0e.html
- [3] Quercy, A. (2025). Computational Image Analysis Standard - MMIDS-CMP-2025 <https://multimodal.institute/en/publications/2025/10/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)

494e2ba2568cb3800810fe52d641af308c5fc075f4223f346ecbbb4944fcad7d

Artist	Arnaud Quercy
Date	2025
Collection	Synesthetic Explorations
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