

# Nanopublication — Computational Image Analysis - AQC0760

by Arnaud Quercy · F Minor - Research on Harmony - Variation 13 · 2024













## Claim 1: Computational Image Analysis - AQC0760

Computational image analysis [3] of artwork F Minor [1] - Research on Harmony - Variation 13 (AQC0760) [2] by Arnaud Quercy [2] 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 2026-02-04.

### 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]: 2975x3967 pixels. Analysis date: 2026-02-04.

### COLOR ANALYSIS

Rank	Color Hex	%	Family	Name
1		32.272B	22.1 red	very dark gray
2		5AA0E6	20.0 blue-violet	cornflowerblue
3		7B4D66	11.5 red	dusty mauve
4		75578D	11.2 violet	dusty mauve
5		886AA2	10.8 violet	dusty mauve
6		76AEE9	10.1 blue-violet	skyblue
7		554548	7.9 red	darkslategray
8		D93E27	2.4 red-orange	chocolate
9		EBAB95	2.3 orange	burlywood
10		373375	1.8 violet	darkslateblue
11		B58F49	0.3 yellow-orange	peru [Accent]
12		98C8E7	0.3 blue	skyblue [Accent]

### Color Families:

Family	%
red	41.5
blue-violet	30.1
violet	23.7
red-orange	2.4
orange	2.3
yellow-orange	0.3
blue	0.3

### Accent Colors:

Hex	Family	Name	Chroma
B58F49	yellow-orange	peru	42.4
98C8E7	blue	skyblue	21.5

### TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.173
Mean Local Roughness	0.009
Roughness Uniformity	0.011
Edge Density	0.025
Mean Gradient Magnitude	0.096
Gradient Variance	0.021
Gradient Smoothness	0.0
Directional Coherence	0.032
Pattern Complexity	0.116
Pattern Repetition	1.0
Detail Frequency Ratio	0.579
Spatial Variation	0.123
Texture Consistency	0.416

### BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.413
Brightness Variance	0.173
Brightness Uniformity	0.58
Brightness Skewness	-0.048
Brightness Entropy	7.129
Rms Contrast	0.173
Michelson Contrast	1.0
Weber Contrast	0.738
Mean Local Contrast	0.012
Contrast Uniformity	0.0
Dynamic Range	1.0
Effective Dynamic Range	0.51
Shadow Percentage	31.729
Midtone Percentage	64.02
Highlight Percentage	4.252
Shadow Clipping	0.0
Highlight Clipping	0.0
Tonal Balance	0.0
Fine Contrast	0.005
Medium Contrast	0.014
Coarse Contrast	0.028
Multiscale Contrast Ratio	0.162
Edge Contrast	0.096
Contrast Clustering	0.584

### SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.785
Color Clustering	0.47

Metric	Value
Color Transition Smoothness	0.741
Transition Uniformity	0.855
Sharp Transition Ratio	0.1
Transition Directionality	0.042
Mean Saturation	0.401
Saturation Variance	0.029
Low Saturation Ratio	0.319
Medium Saturation Ratio	0.653
High Saturation Ratio	0.028
Saturation Clustering	1.0
Hue Concentration	0.551
Complementary Balance	0.008
Analogous Dominance	0.586
Temperature Bias	0.004

## 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 13 — Catalog raisonné. <https://arnaudquercy.art/en/catalogue-raisonne/AQC0760.html>
- [2] Quercy, A. (2025). Untitled - Gallery. [https://artquamanima.com/en/artworks/2024/01/f-minor-research-on-harmony-variation-13\\_8fs.html](https://artquamanima.com/en/artworks/2024/01/f-minor-research-on-harmony-variation-13_8fs.html)
- [3] Quercy, A. (2025). Computational Image Analysis Standard - MMIDS-CMP-2025 h <https://multimodal.institute/en/publications/2025/11/mmids-cmp-2025-computational-image-analysis-standard-dg1.html>

## EPISTEMIC PROFILE

<b>Claim type</b>	computational analysis
<b>Voice</b>	third person
<b>Epistemic status</b>	empirical measurement
<b>Methodology</b>	computational analysis
<b>Certainty</b>	high

## CHECKSUM (SHA-256)

74aa207374d0272927a0d94cfc0768d78b1afc78d0c2db2688c673c-c789b9d44

<b>Artist</b>	Arnaud Quercy
<b>Date</b>	2024
<b>Collection</b>	Synesthetic Explorations
<b>Certificate</b>	20241201-0257
<b>Asset code</b>	AQC0760
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