AQC0603

Nanopublication — Computational Image Analysis - AQC0603

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

Claim 1: Computational Image Analysis - AQC0603

> Computational image analysis [3] of artwork F# minor - Research [1] on Harmony - Variation 1 (AQC0603) [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]: 2553x3404 pixels. Analysis date: 2026-02-04.

COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		6ACAC9	31.8	blue-green	mediumaquamarine
2		4EB8CA	13.5	blue-green	mediumturquoise
3		1E3537	10.0	blue-green	darkslategray
4		3CA2BD	9.4	blue	steelblue
5		678793	8.9	blue	blue gray
6		82DCDC	8.7	blue-green	skyblue
7		314849	8.4	blue-green	darkslategrey
8		E0CDBB	4.4	orange	lightgray
9		84A4B2	3.2	blue	steel gray
10		AD8C41	1.7	yellow-orange	peru
11		0A1621	0.3	blue-violet	black [Accent]
12		B9B3C6	0.3	violet	silver [Accent]
13		B3AC65	0.3	yellow	ochre [Accent]
14		B8DDD4	0.3	green	powderblue [Accent]
15		EEE0E0	0.3	red-orange	mistyrose [Accent]

Color Families:

Family	%
blue-green	72.4
blue	21.5
orange	4.4
yellow-orange	1.7
blue-violet	0.3
violet	0.3
yellow	0.3
green	0.3
red-orange	0.3

Accent Colors:

Hex	Family	Name	Chroma
0A1621	blue-violet	black	9.0
B9B3C6	violet	silver	10.8
B3AC65	yellow	ochre	37.9
B8DDD4	green	powderblue	14.0
EEE0E0	red-orange	mistyrose	5.4

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.187
Mean Local Roughness	0.015
Roughness Uniformity	0.022
Edge Density	0.056
Mean Gradient Magnitude	0.116
Gradient Variance	0.043
Gradient Smoothness	0.0
Directional Coherence	0.113
Pattern Complexity	0.115
Pattern Repetition	1.0
Detail Frequency Ratio	0.645
Spatial Variation	0.154
Texture Consistency	0.345

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.564
Brightness Variance	0.187
Brightness Uniformity	0.668
Brightness Skewness	-0.912
Brightness Entropy	6.998
Rms Contrast	0.187
Michelson Contrast	1.0
Weber Contrast	0.702
Mean Local Contrast	0.016
Contrast Uniformity	0.0
Dynamic Range	1.0
Effective Dynamic Range	0.6
Shadow Percentage	18.218
Midtone Percentage	43.946
Highlight Percentage	37.836
Shadow Clipping	0.008
Highlight Clipping	0.002
Tonal Balance	0.0
Fine Contrast	0.009
Medium Contrast	0.021
Coarse Contrast	None

Metric	Value
Multiscale Contrast Ratio	1.0
Edge Contrast	0.116
Contrast Clustering	0.655

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.788
Color Clustering	0.539
Color Transition Smoothness	0.712
Transition Uniformity	0.728
Sharp Transition Ratio	0.1
Transition Directionality	0.129
Mean Saturation	0.464
Saturation Variance	0.02
Low Saturation Ratio	0.136
Medium Saturation Ratio	0.805
High Saturation Ratio	0.058
Saturation Clustering	0.999
Hue Concentration	0.925
Complementary Balance	0.003
Analogous Dominance	0.962
Temperature Bias	-0.926

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 1 — Catalog raisonné. https://arnaudquercy.art/en/catalogue-raisonne/AQC0603.html

[2] Quercy, A. (2024). F# minor - Research on Harmony - Variation 1 - Gallery. https://artquamanima.com/en/artworks/2024/01/f-minor-research-on-harmony-variation-1_6qq.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)

490eecd7eafc559360b77b6294d082acb-c21581c7636333cd3252a08b5990a54

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