

Nanopublication – Computational Image Analysis – AQC0739

by Arnaud Quercy · G Minor – Research on Harmony – Variation 3 · 2024



CLAIM 1: COMPUTATIONAL IMAGE ANALYSIS – AQC0739

K-means clustering analysis [3] (10 colors) performed on artwork G Minor [1] – Research on Harmony – Variation 3 (AQC0739) [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]: 2959x3946 pixels. Analysis date: 2026-02-04.

COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		92483A	16.1	red-orange	burnt sienna
2		D9B577	16.1	yellow-orange	burlywood
3		C64D29	14.8	red-orange	chocolate
4		201D1F	13.0	gray	very dark gray
5		DEBD8C	10.8	yellow-orange	tan
6		DEC5A6	10.4	yellow-orange	wheat
7		9A4C24	8.7	orange	burnt sienna
8		DE8A1D	7.9	orange	goldenrod
9		4B3E5A	1.6	violet	dusty mauve
10		D2D5F1	0.6	violet	gainsboro
11		572B32	0.3	red	darkslategray [Accent]

Color Families:

Family	%
yellow-orange	37.2
red-orange	30.9
orange	16.6
gray	13.0
violet	2.2
red	0.3

Accent Colors:

Hex	Family	Name	Chroma
572B32	red	darkslategray	21.6

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.226
Mean Local Roughness	0.011
Roughness Uniformity	0.018
Edge Density	0.015
Mean Gradient Magnitude	0.083
Gradient Variance	0.033
Gradient Smoothness	0.0
Directional Coherence	0.051
Pattern Complexity	0.118
Pattern Repetition	1.0
Detail Frequency Ratio	0.631
Spatial Variation	0.19
Texture Consistency	0.512

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.508
Brightness Variance	0.226
Brightness Uniformity	0.555
Brightness Skewness	-0.223
Brightness Entropy	6.887
Rms Contrast	0.226
Michelson Contrast	1.0
Weber Contrast	0.828
Mean Local Contrast	0.012
Contrast Uniformity	0.0
Dynamic Range	1.0
Effective Dynamic Range	0.686
Shadow Percentage	16.563
Midtone Percentage	45.761
Highlight Percentage	37.676
Shadow Clipping	0.001
Highlight Clipping	0.002
Tonal Balance	0.0
Fine Contrast	0.006
Medium Contrast	0.015
Coarse Contrast	0.022
Multiscale Contrast Ratio	0.275
Edge Contrast	0.083
Contrast Clustering	0.488

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.818
Color Clustering	0.598
Color Transition Smoothness	0.781
Transition Uniformity	0.774
Sharp Transition Ratio	0.1
Transition Directionality	0.073
Mean Saturation	0.512
Saturation Variance	0.065
Low Saturation Ratio	0.229
Medium Saturation Ratio	0.464
High Saturation Ratio	0.307
Saturation Clustering	0.999
Hue Concentration	0.954
Complementary Balance	0.0
Analogous Dominance	0.984
Temperature Bias	0.985

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). G Minor - Research on Harmony - Variation 3 - Catalog raisonn  . <https://arnaudquercy.art/en/catalogue-raisonne/AQC0739.html>

[2] Quercy, A. (2025). Untitled - Gallery. https://artquamanima.com/en/artworks/2024/01/g-minor-research-on-harmony-variation-3_87m.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>

WHERE THIS WORK LIVES

THEMATIC ELEMENTS

chromesthetic mapping

G minor chord

acrylic on wood panel

circle of fifths

Research on Harmony

Synesthetic Explorations

spread voicing

geometric color fields

Arnaud Quercy

contemporary chromesthetic painting

EPISTEMIC PROFILE

Claim type	computational analysis
Voice	third person
Epistemic status	empirical measurement
Methodology	computational analysis
Certainty	high

CHECKSUM (SHA-256)

b0a6d8deb09926d7fd86cb48045dc82d6cca4532b44555edf8fe4fcb14b71a20

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