

# Nanopublication — Computational Image Analysis - AQC0696

by Arnaud Quercy · C Major - Research on Harmony - Variation 1 · 2024



## Claim 1: Computational Image Analysis - AQC0696

Computational image analysis [3] of artwork C Major [1] - Research on Harmony - Variation 1 (AQC0696) [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 2026-02-09.

### 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]: 2013x2547 pixels. Analysis date: 2026-02-09.

### COLOR ANALYSIS

Rank	Color Hex	%	Family	Name
1	D48963	25.7	orange	darksalmon
2	DB4C1C	15.6	orange	chocolate
3	D15F43	14.6	red-orange	indianred
4	C6AB81	14.4	yellow-orange	tan
5	DF9972	11.7	orange	sandybrown
6	C62D18	4.8	red-orange	firebrick
7	692D25	4.7	red-orange	russet
8	2C2019	4.2	orange	very dark gray
9	775D4E	3.7	orange	dimgray
10	EFE69C	0.5	yellow	palegoldenrod

### Color Families:

Family	%
orange	60.9

Family	%
red-orange	24.1
yellow-orange	14.4
yellow	0.5

### TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.15
Mean Local Roughness	0.006
Roughness Uniformity	0.016
Edge Density	0.008
Mean Gradient Magnitude	0.038
Gradient Variance	0.018
Gradient Smoothness	0.0
Directional Coherence	0.321
Pattern Complexity	0.094
Pattern Repetition	1.0
Detail Frequency Ratio	0.651
Spatial Variation	0.107
Texture Consistency	0.172

### BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.53
Brightness Variance	0.15
Brightness Uniformity	0.717
Brightness Skewness	-0.846
Brightness Entropy	6.732
Rms Contrast	0.15
Michelson Contrast	1.0
Weber Contrast	0.514
Mean Local Contrast	0.005
Contrast Uniformity	0.0
Dynamic Range	0.992
Effective Dynamic Range	0.475
Shadow Percentage	9.806
Midtone Percentage	72.949
Highlight Percentage	17.245
Shadow Clipping	0.0
Highlight Clipping	0.0
Tonal Balance	0.0
Fine Contrast	0.003
Medium Contrast	0.007
Coarse Contrast	None
Multiscale Contrast Ratio	1.0
Edge Contrast	0.038
Contrast Clustering	0.828

## SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.846
Color Clustering	0.364
Color Transition Smoothness	0.899
Transition Uniformity	0.889
Sharp Transition Ratio	0.1
Transition Directionality	0.35
Mean Saturation	0.582
Saturation Variance	0.034
Low Saturation Ratio	0.048
Medium Saturation Ratio	0.72
High Saturation Ratio	0.232
Saturation Clustering	1.0
Hue Concentration	0.987
Complementary Balance	0.0
Analogous Dominance	1.0
Temperature Bias	0.999

## 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). C Major - Research on Harmony - Variation 1 — Catalog raisonné. <https://arnaudquercy.art/en/catalogue-raisonne/AQC0696.html>  
<https://arnaudquercy.art/fr/catalogue-raisonne/AQC0696.html>
- [2] Quercy, A. (2024). C Major - Research on Harmony - Variation 1 - Gallery. [https://artquamanima.com/en/artworks/2024/01/c-major-research-on-harmony-variation-1\\_7qw.html](https://artquamanima.com/en/artworks/2024/01/c-major-research-on-harmony-variation-1_7qw.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)

1d3152fd81ef8e21b0a6a0e3a23092fd2e1e87-  
fa0f063d1f87af7357e223ceef

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