

# Nanopublication — Computational Image Analysis - AQC0538

by Arnaud Quercy · Ab Major 9 - Research on Harmony - Variation 6 · 2024















## Claim 1: Computational Image Analysis - AQC0538

K-means clustering analysis [3] (10 colors) performed on artwork Ab Major [1] 9 - Research on Harmony - Variation 6 (AQC0538) [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]: 2132x2843 pixels. Analysis date: 2026-02-04.

### COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		0A2771	17.6	violet	very dark purple
2		25283E	16.5	violet	very dark gray
3		20408C	14.6	violet	darkslateblue
4		938DAC	11.1	violet	lightslategray
5		454555	9.7	violet	dusty mauve
6		B9A8C2	8.3	red-violet	silver
7		CF7989	6.8	red	palevioletred
8		816D82	6.8	red-violet	dusty mauve
9		3759A6	5.0	violet	steelblue
10		DCD4DD	3.6	red-violet	gainsboro
11		F86571	0.3	red-orange	salmon [Accent]
12		90AFE2	0.3	blue-violet	skyblue [Accent]
13		FBF0E1	0.3	yellow-orange	yellow-orange white [Accent]
14		7A583D	0.3	orange	burnt sienna [Accent]

### Color Families:

Family	%
violet	74.5
red-violet	18.7
red	6.8
red-orange	0.3
blue-violet	0.3
yellow-orange	0.3
orange	0.3

### Accent Colors:

Hex	Family	Name	Chroma
F86571	red-orange	salmon	61.5
90AFE2	blue-violet	skyblue	29.1

Hex	Family	Name	Chroma
FBF0E1	yellow-orange	white	9.1
7A583D	orange	burnt sienna	23.3

### TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.213
Mean Local Roughness	0.033
Roughness Uniformity	0.03
Edge Density	0.161
Mean Gradient Magnitude	0.249
Gradient Variance	0.086
Gradient Smoothness	0.0
Directional Coherence	0.008
Pattern Complexity	0.125
Pattern Repetition	1.0
Detail Frequency Ratio	0.677
Spatial Variation	0.171
Texture Consistency	0.616

### BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.359
Brightness Variance	0.213
Brightness Uniformity	0.406
Brightness Skewness	0.715
Brightness Entropy	7.33
Rms Contrast	0.213
Michelson Contrast	1.0
Weber Contrast	0.794
Mean Local Contrast	0.034
Contrast Uniformity	0.181
Dynamic Range	1.0
Effective Dynamic Range	0.624
Shadow Percentage	58.944
Midtone Percentage	30.732
Highlight Percentage	10.324
Shadow Clipping	0.001
Highlight Clipping	0.004
Tonal Balance	0.0
Fine Contrast	0.018
Medium Contrast	0.043
Coarse Contrast	0.059
Multiscale Contrast Ratio	0.314
Edge Contrast	0.249
Contrast Clustering	0.384

## SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.703
Color Clustering	0.733
Color Transition Smoothness	0.34
Transition Uniformity	0.436
Sharp Transition Ratio	0.1
Transition Directionality	0.008
Mean Saturation	0.485
Saturation Variance	0.09
Low Saturation Ratio	0.372
Medium Saturation Ratio	0.323
High Saturation Ratio	0.306
Saturation Clustering	0.998
Hue Concentration	0.762
Complementary Balance	0.007
Analogous Dominance	0.832
Temperature Bias	-0.627

## 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). Ab Major 9 - Research on Harmony - Variation 6 — Catalogue raisonné. <https://arnaudquercy.art/en/catalogue-raisonne/AQC0538.html>
- [2] Quercy, A. (2024). Ab Major 9 - Research on Harmony - Variation 6 - Gallery. [https://artquamanima.com/en/artworks/2024/01/ab-major-9-research-on-harmony-variation-6\\_61g.html](https://artquamanima.com/en/artworks/2024/01/ab-major-9-research-on-harmony-variation-6_61g.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)

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