

# Nanopublication — Computational Image Analysis - AQC0938

by Arnaud Quercy · Db Major - Research on Harmony - Variations 14 · 2025



## Claim 1: Computational Image Analysis - AQC0938

K-means clustering analysis [3] (10 colors) performed on artwork Db Major [1] - Research on Harmony - Variations 14 (AQC0938) [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]: 1942x2718 pixels. Analysis date: 2026-02-04.

### COLOR ANALYSIS

Rank	Color Hex	%	Family	Name
1	A47468	20.9	red-orange	gray
2	039BE7	17.6	blue-violet	dodgerblue
3	06BAE4	16.9	blue	deepskyblue
4	0A64B9	13.6	blue-violet	darkcyan
5	091223	9.1	violet	very dark gray
6	08529C	7.4	blue-violet	teal
7	E7E3D8	5.5	yellow-orange	gainsboro
8	14304C	4.3	blue-violet	very dark indigo
9	2A6BB3	3.4	blue-violet	steelblue
10	46B0DC	1.3	blue	mediumturquoise
11	649FAD	0.3	blue-green	cadetblue [Accent]
12	4E352C	0.3	orange	darkslategray [Accent]

### Color Families:

Family	%
blue-violet	46.3
red-orange	20.9
blue	18.2
violet	9.1
yellow-orange	5.5
blue-green	0.3
orange	0.3

### Accent Colors:

Hex	Family	Name	Chroma
649FAD	blue-green	cadetblue	19.8
4E352C	orange	darkslategray	13.5

### TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.187
Mean Local Roughness	0.017
Roughness Uniformity	0.019
Edge Density	0.042
Mean Gradient Magnitude	0.129
Gradient Variance	0.051
Gradient Smoothness	0.0
Directional Coherence	0.006
Pattern Complexity	0.129
Pattern Repetition	1.0
Detail Frequency Ratio	0.612
Spatial Variation	0.088
Texture Consistency	0.66

### BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.427
Brightness Variance	0.187
Brightness Uniformity	0.563
Brightness Skewness	0.104
Brightness Entropy	6.931
Rms Contrast	0.187
Michelson Contrast	1.0
Weber Contrast	0.768
Mean Local Contrast	0.017
Contrast Uniformity	0.0
Dynamic Range	1.0
Effective Dynamic Range	0.757
Shadow Percentage	29.576
Midtone Percentage	64.715
Highlight Percentage	5.709
Shadow Clipping	0.001

Metric	Value
Highlight Clipping	0.0
Tonal Balance	0.0
Fine Contrast	0.01
Medium Contrast	0.022
Coarse Contrast	0.036
Multiscale Contrast Ratio	0.279
Edge Contrast	0.129
Contrast Clustering	0.34

#### SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.694
Color Clustering	0.461
Color Transition Smoothness	0.641
Transition Uniformity	0.606
Sharp Transition Ratio	0.1
Transition Directionality	0.014
Mean Saturation	0.749
Saturation Variance	0.093
Low Saturation Ratio	0.086
Medium Saturation Ratio	0.236
High Saturation Ratio	0.679
Saturation Clustering	0.998
Hue Concentration	0.553
Complementary Balance	0.152
Analogous Dominance	0.776
Temperature Bias	-0.545

## 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 (2025). Db Major - Research on Harmony - Variations 14 — Catalog raisonné. <https://arnaudquercy.art/en/catalogue-raisonne/AQC0938.html>  
<https://arnaudquercy.art/fr/catalogue-raisonne/AQC0938.html>
- [2] Quercy, A. (2025). Db Major - Research on Harmony - Variations 14 - Gallery. [https://artquamanima.com/en/artworks/2025/12/db-major-research-on-harmony-variations-14\\_li1o.html](https://artquamanima.com/en/artworks/2025/12/db-major-research-on-harmony-variations-14_li1o.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

<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)

92f579a2d2d728c5509b1fdaf9dfc2eb737f37e2fe-b5d5221082f03402d7331c

<b>Artist</b>	Arnaud Quercy
<b>Date</b>	2025
<b>Collection</b>	Synesthetic Explorations
<b>Certificate</b>	20251231-0133
<b>Asset code</b>	AQC0938
<b>Version</b>	1
<b>Published</b>	2026-03-04