

Nanopublication — Computational Image Analysis - AQC0918

by Arnaud Quercy · Bb Major - Research on Harmony - Variations 8 · 2025













Claim 1: Computational Image Analysis - AQC0918

K-means clustering analysis [3] (10 colors) performed on artwork Bb Major [1] - Research on Harmony - Variations 8 (AQC0918) [2] by Arnaud Quercy [2] on 2025-12-11. 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]: 2008x2008 pixels. Analysis date: 2025-12-11.

COLOR ANALYSIS

Rank	Color Hex	%	Family	Name
1		BC85BB 17.2	red-violet	steel gray
2		D1A8CE 15.0	red-violet	plum
3		EDA760 13.8	orange	sandybrown
4		B98171 11.8	red-orange	rosybrown
5		A16AA2 11.6	red-violet	dusty mauve
6		CD9788 10.5	red-orange	tan
7		F08825 7.4	orange	goldenrod
8		F2D5CF 6.1	red-orange	bisque
9		4F403B 4.7	orange	darkslategray
10		2C0D0F 1.9	red-orange	very dark red
11		FEF9EA 0.3	yellow	white [Accent]
12		FDC983 0.3	yellow-orange	khaki [Accent]

Color Families:

Family	%
red-violet	43.9
red-orange	30.2
orange	25.9
yellow	0.3
yellow-orange	0.3

Accent Colors:

Hex	Family	Name	Chroma
FEF9EA	yellow	white	8.1
FDC983	yellow-orange	khaki	43.2

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.147
Mean Local Roughness	0.036

Metric	Value
Roughness Uniformity	0.032
Edge Density	0.193
Mean Gradient Magnitude	0.273
Gradient Variance	0.112
Gradient Smoothness	0.0
Directional Coherence	0.001
Pattern Complexity	0.116
Pattern Repetition	1.0
Detail Frequency Ratio	0.659
Spatial Variation	0.079
Texture Consistency	0.746

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.619
Brightness Variance	0.147
Brightness Uniformity	0.763
Brightness Skewness	-1.226
Brightness Entropy	6.959
Rms Contrast	0.147
Michelson Contrast	1.0
Weber Contrast	0.372
Mean Local Contrast	0.039
Contrast Uniformity	0.16
Dynamic Range	1.0
Effective Dynamic Range	0.557
Shadow Percentage	6.299
Midtone Percentage	56.405
Highlight Percentage	37.296
Shadow Clipping	0.001
Highlight Clipping	0.001
Tonal Balance	0.0
Fine Contrast	0.019
Medium Contrast	0.048
Coarse Contrast	0.062
Multiscale Contrast Ratio	0.308
Edge Contrast	0.273
Contrast Clustering	0.254

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.712
Color Clustering	0.344
Color Transition Smoothness	0.322
Transition Uniformity	0.267
Sharp Transition Ratio	0.1

Metric	Value
Transition Directionality	0.001
Mean Saturation	0.387
Saturation Variance	0.039
Low Saturation Ratio	0.352
Medium Saturation Ratio	0.559
High Saturation Ratio	0.089
Saturation Clustering	0.998
Hue Concentration	0.774
Complementary Balance	0.0
Analogous Dominance	0.653
Temperature Bias	0.797

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). Bb Major - Research on Harmony - Variations 8 — Catalog raisonné. <https://arnaudquercy.art/en/catalogue-raisonne/AQC0918.html>

[2] Quercy, A. (2025). Bb Major - Research on Harmony - Variations 8 - Gallery. https://artquamanima.com/en/artworks/2025/11/bb-major-research-on-harmony-variations-8_igh.html

[3] Quercy, A. (2025). Computational Image Analysis Standard - MMIDS-CMP-2025 h <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)

4907e8195f606311bfbb198a5470afedbb972dd3109e-f440be45b78833a8962f2

Artist	Arnaud Quercy
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