

Nanopublication – Computational Image Analysis – AQC0717

by Arnaud Quercy · Bb Minor – Research on Harmony – Variation 8 · 2024



CLAIM 1: COMPUTATIONAL IMAGE ANALYSIS – AQC0717

Computational image analysis [3] of artwork Bb Minor [1] – Research on Harmony – Variation 8 (AQC0717) [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 2026-02-04.

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]: 3024x4032 pixels. Analysis date: 2026-02-04.

COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		9E2842	19.0	red-orange	brown
2		F0A4B7	15.1	red	lightpink
3		542B25	11.2	red-orange	russet
4		421B15	10.6	red-orange	very dark red
5		D7476B	9.4	red	indianred
6		C16776	8.2	red	palevioletred
7		A75169	8.0	red	burnt sienna
8		6C3636	7.9	red-orange	russet
9		EC5F83	6.9	red	lightcoral
10		7EADBC	3.6	blue	mediumaquamarine
11		EEBA92	0.3	orange	burlywood [Accent]
12		1B162C	0.3	violet	very dark purple [Accent]
13		9BBBB9	0.3	blue-green	steel gray [Accent]
14		A6C6C2	0.3	green	silver [Accent]

Color Families:

Family	%
red-orange	48.7
red	47.7
blue	3.6
orange	0.3
violet	0.3
blue-green	0.3
green	0.3

Accent Colors:

Hex	Family	Name	Chroma
EEBA92	orange	burlywood	30.9
1B162C	violet	very dark purple	16.1
9BBBB9	blue-green	steel gray	11.4
A6C6C2	green	silver	12.2

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.192
Mean Local Roughness	0.017
Roughness Uniformity	0.018
Edge Density	0.072
Mean Gradient Magnitude	0.138
Gradient Variance	0.032
Gradient Smoothness	0.0
Directional Coherence	0.014
Pattern Complexity	0.119
Pattern Repetition	1.0
Detail Frequency Ratio	0.647
Spatial Variation	0.159
Texture Consistency	0.504

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.415
Brightness Variance	0.192
Brightness Uniformity	0.537
Brightness Skewness	0.395
Brightness Entropy	7.283
Rms Contrast	0.192
Michelson Contrast	1.0
Weber Contrast	0.754
Mean Local Contrast	0.019
Contrast Uniformity	0.013
Dynamic Range	0.996
Effective Dynamic Range	0.604
Shadow Percentage	43.37
Midtone Percentage	40.365
Highlight Percentage	16.265
Shadow Clipping	0.001
Highlight Clipping	0.0
Tonal Balance	0.071
Fine Contrast	0.009
Medium Contrast	0.023
Coarse Contrast	0.033
Multiscale Contrast Ratio	0.267
Edge Contrast	0.138
Contrast Clustering	0.496

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.797
Color Clustering	0.577
Color Transition Smoothness	0.662
Transition Uniformity	0.808
Sharp Transition Ratio	0.1
Transition Directionality	0.023
Mean Saturation	0.566
Saturation Variance	0.025
Low Saturation Ratio	0.037
Medium Saturation Ratio	0.709
High Saturation Ratio	0.254
Saturation Clustering	0.999
Hue Concentration	0.925
Complementary Balance	0.015
Analogous Dominance	0.969
Temperature Bias	0.939

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). Bb Minor - Research on Harmony - Variation 8 - Catalog raisonn . <https://arnaudquercy.art/en/catalogue-raisonne/AQC0717.html>

[2] Quercy, A. (2024). Bb Minor - Research on Harmony - Variation 8 - Gallery. https://artquamanima.com/en/art-works/2024/01/bb-minor-research-on-harmony-variation-8_7z2.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)

cbc588aef857365e0ff689744e76b9e2212399e074df5ec64ab0291544a1c359

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