

Nanopublication — Computational Image Analysis - AQC0769

by Arnaud Quercy · Bb Minor - Research on Harmony - Variation 9 · 2024














Claim 1: Computational Image Analysis - AQC0769

K-means clustering analysis [3] (10 colors) performed on artwork Bb Minor [1] - Research on Harmony - Variation 9 (AQC0769) [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]: 2321x3482 pixels. Analysis date: 2026-02-04.

COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		6AC2D2	15.8	blue-green	mediumturquoise
2		221C20	15.6	gray	very dark gray
3		312C35	14.1	violet	very dark gray
4		855D89	13.3	red-violet	dusty mauve
5		755175	12.0	red-violet	dusty mauve
6		5BAE8E	11.3	blue-green	cadetblue
7		744456	7.9	red	dusty mauve
8		956EA1	5.6	red-violet	dusty mauve
9		3B97D3	2.5	blue-violet	steelblue
10		CBC1E1	2.0	violet	thistle
11		235867	0.3	blue	darkslategray [Accent]
12		917D40	0.3	yellow-orange	burnt sienna [Accent]
13		E6E4D7	0.3	yellow	white [Accent]

Color Families:

Family	%
red-violet	30.9
blue-green	27.1
violet	16.1
gray	15.6
red	7.9
blue-violet	2.5
blue	0.3
yellow-orange	0.3
yellow	0.3

Accent Colors:

Hex	Family	Name	Chroma
235867	blue	darkslategray	19.1

Hex	Family	Name	Chroma
917D40	yellow-orange	burnt sienna	36.0
E6E4D7	yellow	white	7.3

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.199
Mean Local Roughness	0.008
Roughness Uniformity	0.009
Edge Density	0.017
Mean Gradient Magnitude	0.09
Gradient Variance	0.019
Gradient Smoothness	0.0
Directional Coherence	0.036
Pattern Complexity	0.114
Pattern Repetition	1.0
Detail Frequency Ratio	0.566
Spatial Variation	0.165
Texture Consistency	0.341

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.404
Brightness Variance	0.199
Brightness Uniformity	0.508
Brightness Skewness	-0.002
Brightness Entropy	7.257
Rms Contrast	0.199
Michelson Contrast	1.0
Weber Contrast	0.799
Mean Local Contrast	0.01
Contrast Uniformity	0.0
Dynamic Range	1.0
Effective Dynamic Range	0.576
Shadow Percentage	34.175
Midtone Percentage	56.033
Highlight Percentage	9.792
Shadow Clipping	0.002
Highlight Clipping	0.0
Tonal Balance	0.033
Fine Contrast	0.004
Medium Contrast	0.013
Coarse Contrast	0.028
Multiscale Contrast Ratio	0.147
Edge Contrast	0.09
Contrast Clustering	0.659

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.787
Color Clustering	0.763
Color Transition Smoothness	0.759
Transition Uniformity	0.87
Sharp Transition Ratio	0.1
Transition Directionality	0.049
Mean Saturation	0.351
Saturation Variance	0.024
Low Saturation Ratio	0.347
Medium Saturation Ratio	0.628
High Saturation Ratio	0.025
Saturation Clustering	1.0
Hue Concentration	0.539
Complementary Balance	0.007
Analogous Dominance	0.582
Temperature Bias	-0.104

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 9 — Catalog raisonné. <https://arnaudquercy.art/en/catalogue-raisonne/AQC0769.html>
- [2] Quercy, A. (2024). Bb Minor - Research on Harmony - Variation 9 - Gallery. https://artquamanima.com/en/artworks/2024/01/bb-minor-research-on-harmony-variation-9_8ja.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)

b140da61e317c4ad79a688a3c4bdb0b835219ef83fd9b4d18a7f77bebbdbd-c4b

Artist	Arnaud Quercy
Date	2024
Collection	Synesthetic Explorations
Certificate	20241201-0266
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