AQC0577

Nanopublication — Computational Image Analysis - AQC0577

by Arnaud Quercy · Seattle · 2024

Claim 1: Computational Image Analysis - AQC0577

> Computational image analysis [3] of artwork Seattle [1] (AQC0577) [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]: 1366x2048 pixels. Analysis date: 2026-02-04.

COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		345588	16.8	blue-violet	grayish purple
2		5191B8	13.2	blue	grayish purple
3		76B4AD	11.9	green	mediumaquamarine
4		3B6BA5	11.3	blue-violet	grayish purple
5		2D3C5B	10.8	blue-violet	grayish purple
6		607494	10.8	blue-violet	grayish purple
7		71B4E4	7.0	blue-violet	skyblue
8		B3AB86	7.0	yellow	rosybrown
9		9FD8E1	6.5	blue-green	lightblue
10		D0D0B8	4.8	yellow	silver
11		DDEEE5	0.3	yellow-green	white [Accent]
12		3B70D7	0.3	violet	royalblue [Accent]
13		A3915D	0.3	yellow-orange	ochre [Accent]
14		6C6157	0.3	orange	dimgray [Accent]

Color Families:

Family	%
blue-violet	56.6
blue	13.2
green	11.9
yellow	11.7
blue-green	6.5
yellow-green	0.3
violet	0.3
yellow-orange	0.3
orange	0.3

Accent Colors:

Hex	Family	Name	Chroma
DDEEE5	yellow-green	white	7.3
3B70D7	violet	royalblue	60.4
A3915D	yellow-orange	ochre	30.0
6C6157	orange	dimgray	7.3

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.179
Mean Local Roughness	0.023
Roughness Uniformity	0.021
Edge Density	0.1
Mean Gradient Magnitude	0.166
Gradient Variance	0.048
Gradient Smoothness	0.0
Directional Coherence	0.013
Pattern Complexity	0.124
Pattern Repetition	1.0
Detail Frequency Ratio	0.631
Spatial Variation	0.083
Texture Consistency	0.759

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.497
Brightness Variance	0.179
Brightness Uniformity	0.64
Brightness Skewness	0.185
Brightness Entropy	7.415
Rms Contrast	0.179
Michelson Contrast	0.969
Weber Contrast	0.644
Mean Local Contrast	0.022
Contrast Uniformity	0.155
Dynamic Range	0.98
Effective Dynamic Range	0.58
Shadow Percentage	21.915
Midtone Percentage	56.992
Highlight Percentage	21.093
Shadow Clipping	0.0
Highlight Clipping	0.0
Tonal Balance	0.22
Fine Contrast	0.013
Medium Contrast	0.029
Coarse Contrast	None
Multiscale Contrast Ratio	1.0
Edge Contrast	0.166

Metric	Value
Contrast Clustering	0.241

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.664
Color Clustering	0.574
Color Transition Smoothness	0.566
Transition Uniformity	0.681
Sharp Transition Ratio	0.1
Transition Directionality	0.013
Mean Saturation	0.462
Saturation Variance	0.029
Low Saturation Ratio	0.198
Medium Saturation Ratio	0.732
High Saturation Ratio	0.07
Saturation Clustering	0.999
Hue Concentration	0.841
Complementary Balance	0.052
Analogous Dominance	0.897
Temperature Bias	-0.894

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). Seattle — Catalog raisonné. https://arnaudquercy.art/en/catalogue-raisonne/AQC0577.html

[2] Quercy, A. (2025). Untitled - Gallery. https://artquamanima.com/en/artworks/2024/01/seattle_6gm.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)

74dc4a2bc01666e8f4ada06db99df690790f1885ab9ed013e6aed203440c-ccf5

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Date	2024
Collection	American Voyage
Certificate	20240512-0073
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