AQC0452

Nanopublication — Computational Image Analysis - AQC0452

by Arnaud Quercy · The Grand Canyon state · 2023

Claim 1: Computational Image Analysis - AQC0452

> Analysis record [3]: The [1] Grand Canyon state (AQC0452) [2] by Arnaud Quercy [2]. Method: k-means. Parameters: 10 colors. Metrics: color distribution, texture, brightness, spatial patterns. Completed: 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]: 1440x1800 pixels. Analysis date: 2026-02-04.

COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		6B3038	15.8	red	russet
2		B17953	12.9	orange	peru
3		293032	12.7	gray	very dark gray
4		CBB59F	12.2	orange	tan
5		CC996D	10.9	orange	darksalmon
6		833E4D	9.6	red	burnt sienna
7		985B33	9.1	orange	burnt sienna
8		D6CEBD	7.7	yellow-orange	lightgray
9		A7A590	4.8	yellow	steel gray
10		CE8F15	4.2	yellow-orange	darkgoldenrod
11		1F577B	0.3	blue-violet	grayish purple [Accent]
12		1E0D05	0.3	red-orange	black [Accent]
13		D6EBE8	0.3	green	white [Accent]
14		7BA38A	0.3	yellow-green	lightslategray [Accent]
15		BDDBDC	0.3	blue-green	powderblue [Accent]

Color Families:

Family	%
orange	45.2
red	25.4
gray	12.7
yellow-orange	11.9
yellow	4.8
blue-violet	0.3
red-orange	0.3
green	0.3
yellow-green	0.3
blue-green	0.3

Accent Colors:

Hex	Family	Name	Chroma
1F577B	blue-violet	grayish purple	26.5
1E0D05	red-orange	black	9.4
D6EBE8	green	white	7.1
7BA38A	yellow-green	lightslategray	21.0
BDDBDC	blue-green	powderblue	10.8

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.21
Mean Local Roughness	0.045
Roughness Uniformity	0.029
Edge Density	0.256
Mean Gradient Magnitude	0.282
Gradient Variance	0.074
Gradient Smoothness	0.037
Directional Coherence	0.016
Pattern Complexity	0.129
Pattern Repetition	1.0
Detail Frequency Ratio	0.694
Spatial Variation	0.164
Texture Consistency	0.641

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.48
Brightness Variance	0.21
Brightness Uniformity	0.562
Brightness Skewness	0.062
Brightness Entropy	7.512
Rms Contrast	0.21
Michelson Contrast	1.0
Weber Contrast	0.741
Mean Local Contrast	0.039
Contrast Uniformity	0.371
Dynamic Range	1.0
Effective Dynamic Range	0.624
Shadow Percentage	33.861
Midtone Percentage	40.968
Highlight Percentage	25.171
Shadow Clipping	0.003
Highlight Clipping	0.002
Tonal Balance	0.262
Fine Contrast	0.032
Medium Contrast	0.05
Coarse Contrast	0.059
Multiscale Contrast Ratio	0.549

Metric	Value
Edge Contrast	0.282
Contrast Clustering	0.359

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.753
Color Clustering	0.562
Color Transition Smoothness	0.292
Transition Uniformity	0.538
Sharp Transition Ratio	0.1
Transition Directionality	0.026
Mean Saturation	0.434
Saturation Variance	0.05
Low Saturation Ratio	0.338
Medium Saturation Ratio	0.566
High Saturation Ratio	0.096
Saturation Clustering	0.998
Hue Concentration	0.79
Complementary Balance	0.033
Analogous Dominance	0.912
Temperature Bias	0.835

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 (2023). The Grand Canyon state — Catalog raisonné. https://arnaudquercy.art/en/catalogue-raisonne/AQC0452.html

[2] Quercy, A. (2025). Untitled - Gallery. https://artquamanima.com/en/artworks/2023/01/the-grand-canyon-state_540.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)

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