AQC0217

Nanopublication — Computational Image Analysis - AQC0217

by Arnaud Quercy · The Two Cities - part II · 2021

Claim 1: Computational Image Analysis - AQC0217

> Analysis record [1]: The Two Cities - part II (AQC0217) [1] by Arnaud Quercy [2]. Method: k-means. Parameters: 10 colors. Metrics: color distribution, texture, brightness, spatial patterns. Completed: 2025-12-06.

CONTEXT

Analysis performed according to MMIDS-CMP-2025 [1] 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]: 1438x2048 pixels. Analysis date: 2025-12-06.

COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		0F1D2E	16.3	blue-violet	very dark gray
2		A9ABA1	16.1	yellow-green	steel gray
3		969C96	15.2	gray	steel gray
4		BEBDB0	10.5	yellow	silver
5		808D8B	9.2	green	gray
6		5F737B	9.0	blue	dimgray
7		D1CFC1	8.8	yellow	lightgray
8		385465	7.3	blue	darkslategray
9		1E394C	6.1	blue	grayish purple
10		EAE7DB	1.5	yellow	white

Color Families:

Family	%
blue	22.4
yellow	20.8
blue-violet	16.3
yellow-green	16.1
gray	15.2
green	9.2

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.24
Mean Local Roughness	0.008
Roughness Uniformity	0.024
Edge Density	0.011
Mean Gradient Magnitude	0.06
Gradient Variance	0.058
Gradient Smoothness	0.0
Directional Coherence	0.222
Pattern Complexity	0.103
Pattern Repetition	1.0
Detail Frequency Ratio	0.587
Spatial Variation	0.16
Texture Consistency	0.652

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.503
Brightness Variance	0.24
Brightness Uniformity	0.522
Brightness Skewness	-0.483
Brightness Entropy	7.31
Rms Contrast	0.24
Michelson Contrast	1.0
Weber Contrast	0.864
Mean Local Contrast	0.009
Contrast Uniformity	0.0
Dynamic Range	0.949
Effective Dynamic Range	0.718
Shadow Percentage	27.68
Midtone Percentage	43.66
Highlight Percentage	28.66
Shadow Clipping	0.0
Highlight Clipping	0.0
Tonal Balance	0.0
Fine Contrast	0.005
Medium Contrast	0.012
Coarse Contrast	None
Multiscale Contrast Ratio	1.0
Edge Contrast	0.06
Contrast Clustering	0.348

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.68
Color Clustering	0.943
Color Transition Smoothness	0.834
Transition Uniformity	0.581
Sharp Transition Ratio	0.1
Transition Directionality	0.229
Mean Saturation	0.24
Saturation Variance	0.061
Low Saturation Ratio	0.696
Medium Saturation Ratio	0.287
High Saturation Ratio	0.017

Metric	Value
Saturation Clustering	0.999
Hue Concentration	0.994
Complementary Balance	0.0
Analogous Dominance	1.0
Temperature Bias	-1.0

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] 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

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