

Nanopublication – Computational Image Analysis –
AQC0802

by Arnaud Quercy · Arches of Porto Venere · 2024



CLAIM 1: COMPUTATIONAL IMAGE ANALYSIS - AQC0802

Computational image analysis [3] of artwork Arches [1] of Porto Venere (AQC0802) [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]: 2359x3539 pixels. Analysis date: 2026-02-04.

COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		8D8D7C	15.0	yellow	gray
2		9D9C8F	14.3	yellow	steel gray
3		A9ADA6	14.0	gray	steel gray
4		C7C7D3	12.8	violet	lightgray
5		B5BBC2	10.7	gray	silver
6		797B64	7.8	yellow-green	dimgray
7		859BA2	7.2	blue	lightslategray
8		535B58	6.8	gray	dimgrey
9		5D8082	6.4	blue-green	blue gray
10		343633	5.1	gray	darkslategray

Color Families:

Family	%
gray	36.5
yellow	29.3
violet	12.8
yellow-green	7.8
blue	7.2
blue-green	6.4

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.15
Mean Local Roughness	0.018
Roughness Uniformity	0.015
Edge Density	0.083
Mean Gradient Magnitude	0.148
Gradient Variance	0.031
Gradient Smoothness	0.0
Directional Coherence	0.01
Pattern Complexity	0.119
Pattern Repetition	1.0
Detail Frequency Ratio	0.617
Spatial Variation	0.089
Texture Consistency	0.679

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.585
Brightness Variance	0.15
Brightness Uniformity	0.743
Brightness Skewness	-0.746
Brightness Entropy	7.14
Rms Contrast	0.15
Michelson Contrast	1.0
Weber Contrast	0.51
Mean Local Contrast	0.019
Contrast Uniformity	0.231
Dynamic Range	0.961
Effective Dynamic Range	0.514
Shadow Percentage	7.464
Midtone Percentage	60.466
Highlight Percentage	32.07
Shadow Clipping	0.0
Highlight Clipping	0.0
Tonal Balance	0.0
Fine Contrast	0.01
Medium Contrast	0.024
Coarse Contrast	0.037
Multiscale Contrast Ratio	0.266
Edge Contrast	0.148
Contrast Clustering	0.321

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.709
Color Clustering	0.882
Color Transition Smoothness	0.621
Transition Uniformity	0.791
Sharp Transition Ratio	0.1
Transition Directionality	0.012
Mean Saturation	0.132
Saturation Variance	0.008
Low Saturation Ratio	0.934
Medium Saturation Ratio	0.066
High Saturation Ratio	0.0
Saturation Clustering	1.0
Hue Concentration	0.462
Complementary Balance	0.017
Analogous Dominance	0.531
Temperature Bias	-0.433

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). Arches of Porto Venere – Catalog raisonné. <https://arnaudquercy.art/en/catalogue-raisonne/AQC0802.html>

[2] Quercy, A. (2025). Untitled – Gallery. https://artquamanima.com/en/artworks/2024/01/arches-of-porto-venere_8w4.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>

WHERE THIS WORK LIVES

THEMATIC ELEMENTS

Porto Venere watercolor

Mediterranean architecture

abstract geometry

coastal interpretation

gray tones

blue-green accents

architectural abstraction

Mediterranean Echoes

EPISTEMIC PROFILE

Claim type	computational analysis
Voice	third person
Epistemic status	empirical measurement
Methodology	computational analysis
Certainty	high

CHECKSUM (SHA-256)

7f8f342c55d5c7bdd1ddf2f552d48e11924b578d3e5baace59cb47f5f2cd2c0d

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