

# Nanopublication — Computational Image Analysis - AQC0453

by Arnaud Quercy · The Golden State · 2023

## Claim 1: Computational Image Analysis - AQC0453

K-means clustering analysis [3] (10 colors) performed on artwork The [1] Golden State (AQC0453) [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]: 1536x2048 pixels. Analysis date: 2026-02-04.

### COLOR ANALYSIS

Rank	Color Hex	%	Family	Name
1	CBA36A	14.6	yellow-orange	ochre
2	7CABA0	13.3	green	darkseagreen
3	99BFBA	13.2	green	steel gray
4	E1C186	11.5	yellow-orange	burlywood
5	6B8D84	9.7	green	blue gray
6	B77E44	9.7	orange	peru
7	BCD1D7	9.6	blue-green	lightsteelblue
8	3C312D	6.6	orange	darkslategray
9	6A574B	6.1	orange	dimgray
10	3D6777	5.8	blue	dimgray
11	7D1E1C	0.3	red-orange	maroon [Accent]
12	9D997A	0.3	yellow	gray [Accent]
13	1B3146	0.3	blue-violet	darkslategray [Accent]
14	678749	0.3	yellow-green	olivedrab [Accent]

### Color Families:

Family	%
green	36.1
yellow-orange	26.1
orange	22.3
blue-green	9.6
blue	5.8
red-orange	0.3
yellow	0.3
blue-violet	0.3
yellow-green	0.3

### Accent Colors:

Hex	Family	Name	Chroma
7D1E1C	red-orange	maroon	48.5
9D997A	yellow	gray	17.5
1B3146	blue-violet	darkslategray	16.1
678749	yellow-green	olivedrab	37.8

### TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.172
Mean Local Roughness	0.036
Roughness Uniformity	0.019
Edge Density	0.241
Mean Gradient Magnitude	0.254
Gradient Variance	0.052
Gradient Smoothness	0.102
Directional Coherence	0.008
Pattern Complexity	0.115
Pattern Repetition	1.0
Detail Frequency Ratio	0.652
Spatial Variation	0.086
Texture Consistency	0.761

### BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.595
Brightness Variance	0.172
Brightness Uniformity	0.71
Brightness Skewness	-0.805
Brightness Entropy	7.343
Rms Contrast	0.172
Michelson Contrast	1.0
Weber Contrast	0.58
Mean Local Contrast	0.034
Contrast Uniformity	0.477
Dynamic Range	1.0
Effective Dynamic Range	0.573
Shadow Percentage	10.18
Midtone Percentage	48.583
Highlight Percentage	41.237
Shadow Clipping	0.004
Highlight Clipping	0.0
Tonal Balance	0.057
Fine Contrast	0.023
Medium Contrast	0.043
Coarse Contrast	0.058
Multiscale Contrast Ratio	0.405
Edge Contrast	0.254

Metric	Value
Contrast Clustering	0.239

## SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.688
Color Clustering	0.616
Color Transition Smoothness	0.367
Transition Uniformity	0.656
Sharp Transition Ratio	0.1
Transition Directionality	0.005
Mean Saturation	0.355
Saturation Variance	0.033
Low Saturation Ratio	0.37
Medium Saturation Ratio	0.6
High Saturation Ratio	0.031
Saturation Clustering	0.999
Hue Concentration	0.342
Complementary Balance	0.1
Analogous Dominance	0.558
Temperature Bias	0.119

## 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 Golden State — Catalog raisonné. <https://arnaudquercy.art/en/catalogue-raisonne/AQC0453.html>
- [2] Quercy, A. (2025). Untitled - Gallery. [https://artquamanima.com/en/artworks/2023/01/the-golden-state\\_54e.html](https://artquamanima.com/en/artworks/2023/01/the-golden-state_54e.html)
- [3] Quercy, A. (2025). Computational Image Analysis Standard - MMIDS-CMP-2025 h <https://multimodal.institute/en/publications/2025/11/mmids-cmp-2025-computational-image-analysis-standard-dg1.html>

## EPISTEMIC PROFILE

<b>Claim type</b>	computational analysis
<b>Voice</b>	third person
<b>Epistemic status</b>	empirical measurement
<b>Methodology</b>	computational analysis
<b>Certainty</b>	high

## CHECKSUM (SHA-256)

56a3288fc276f012e8889f98f3d00b5ba4b-da1a3090490ce95844d9580ce0266

<b>Artist</b>	Arnaud Quercy
<b>Date</b>	2023
<b>Collection</b>	American Voyage
<b>Certificate</b>	20231231-0039
<b>Asset code</b>	AQC0453
<b>Version</b>	1
<b>Published</b>	2026-04-09