AQC0514 | NAN-COL000014

Nanopublication — Computational Image Analysis - AQC0514

by Arnaud Quercy · Archimedes, the owl · 2024

CLAIM 1: COMPUTATIONAL IMAGE ANALYSIS - AQC0514

K-means clustering (10 colors) performed on artwork Archimedes, the owl (AQC0514) [1] by Arnaud Quercy [2] on 2025-10-03, according to IDS-CMP-2025 [3]. Documentation includes: color families, texture roughness, brightness distribution, spatial coherence.

CONTEXT

Analysis performed according to IDS-CMP-2025 [3] includes four metric categories: (a) Color distribution via k-means (10 colors), (b) Texture analysis using Haralick features, (c) Brightness and contrast measurements, (d) Spatial pattern characterization. Source image: 1638x2048 pixels. Analysis date: 2025-10-03.

A) COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		D7DBC9	25.7	yellow-green	lightgray
2		CDCFBC	22.3	yellow-green	silver
3		E2E6D6	11.3	yellow-green	white
4		0E0E0F	11.0	black	black
5		322B1D	9.9	yellow-orange	very dark gray
6		4F442D	6.4	yellow-orange	dark brown
7		66665E	3.8	yellow-green	dimgray
8		736039	3.8	yellow-orange	dark brown
9		93875B	3.3	yellow-orange	gray
10		ACA877	2.6	yellow	ochre

Color Families:

Family	%
yellow-green	63.1
yellow-orange	23.3
black	11.0
yellow	2.6

B) TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.31
Mean Local Roughness	0.016
Roughness Uniformity	0.018
Edge Density	0.066
Mean Gradient Magnitude	0.113
Gradient Variance	0.028
Gradient Smoothness	0.0
Directional Coherence	0.165
Pattern Complexity	0.143
Pattern Repetition	1.0
Detail Frequency Ratio	0.634
Spatial Variation	0.236
Texture Consistency	0.332

C) BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.602
Brightness Variance	0.31
Brightness Uniformity	0.485
Brightness Skewness	-0.681
Brightness Entropy	6.936
Rms Contrast	0.31
Michelson Contrast	1.0
Weber Contrast	0.906
Mean Local Contrast	0.015
Contrast Uniformity	0.0
Dynamic Range	0.996
Effective Dynamic Range	0.843
Shadow Percentage	27.691
Midtone Percentage	12.215
Highlight Percentage	60.094
Shadow Clipping	0.001
Highlight Clipping	0.0
Tonal Balance	0.0
Fine Contrast	0.009
Medium Contrast	0.019
Coarse Contrast	None
Multiscale Contrast Ratio	1.0
Edge Contrast	0.113
Contrast Clustering	0.668

D) SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.744
Color Clustering	0.948
Color Transition Smoothness	0.713
Transition Uniformity	0.816
Sharp Transition Ratio	0.1
Transition Directionality	0.167
Mean Saturation	0.173
Saturation Variance	0.027
Low Saturation Ratio	0.791
Medium Saturation Ratio	0.205
High Saturation Ratio	0.004
Saturation Clustering	0.999
Hue Concentration	0.914
Complementary Balance	0.014
Analogous Dominance	0.96
Temperature Bias	0.874

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 Ideamorphic Studies' computational imaging systems.

REFERENCES

[1] Quercy, A. (2024). Archimedes, the owl - Catalogue Raisonné. https://arnaudquercy.art/en/catalogue-raisonne/AQC0514.html

[2] Quercy, A. (2025). ORCID https://orcid.org/0009-0000-2662-7790

[3] Quercy, A. (2026). Computational Image Analysis Standard. https://ideamorphism.org/en/measurements/2025/11/ids-cmp-2025-computational-image-analysis-standard-5dq9.html

EPISTEMIC PROFILE

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

CHECKSUM (SHA-256)

b2a122033b66edf17a4f61b33dea9217dc1f4c975946a75e8aa99faf03a05541

Artist	Arnaud Quercy
Date	2024
Collection	Spells and Magic
Certificate	20240120-0010

Asset code	AQC0514
Identifier	NAN-COL000014
Version	1
Published	2025-10-03

ISSN: applied for — U.S. ISSN Center, Library of Congress

Published by Art Quam Anima Publishing New York,
an assumed name of AQA Publishing LLC

c/o Northwest Registered Agent, 418 Broadway Ste N
Albany, NY 12207, USA
+1 917-764-5470

NY DOS ID 7624376 · Assumed Name ID 7658709

publishing.artquamanima.com

Last updated: 2026-09-16

Persistent URI: https://ideamorphism.org/en/nanopubs/2025/10/AQC0514-computational-image-analysis-aqc0514.pdf