

AQC0479

# Nanopublication — Computational Image Analysis - AQC0479

by Arnaud Quercy · Luigi · 2023














## Claim 1: Computational Image Analysis - AQC0479

K-means clustering analysis [3] (10 colors) performed on artwork Luigi [1] (AQC0479) [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		8A8C63	14.1	yellow	gray
2		9DAA91	12.2	yellow-green	darkseagreen
3		4F3425	11.9	orange	dark brown
4		676249	11.9	yellow	dimgray
5		6FC0DB	11.7	blue	skyblue
6		93DEEF	8.7	blue-green	lightskyblue
7		5E7977	7.8	green	dimgray
8		519DBC	7.6	blue	steelblue
9		305154	7.5	blue-green	darkslategray
10		C0D4BA	6.6	yellow-green	silver
11		450B07	0.3	red-orange	very dark red [Accent]
12		2E9BD7	0.3	blue-violet	dodgerblue [Accent]
13		BE9A6C	0.3	yellow-orange	ochre [Accent]

### Color Families:

Family	%
yellow	26.0
blue	19.3
yellow-green	18.8
blue-green	16.2
orange	11.9
green	7.8
red-orange	0.3
blue-violet	0.3
yellow-orange	0.3

### Accent Colors:

Hex	Family	Name	Chroma
450B07	red-orange	very dark red	31.9
2E9BD7	blue-violet	dodgerblue	40.3

Hex	Family	Name	Chroma
BE9A6C	yellow-orange	ochre	29.8

### TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.193
Mean Local Roughness	0.079
Roughness Uniformity	0.035
Edge Density	0.387
Mean Gradient Magnitude	0.536
Gradient Variance	0.134
Gradient Smoothness	0.318
Directional Coherence	0.006
Pattern Complexity	0.116
Pattern Repetition	1.0
Detail Frequency Ratio	0.717
Spatial Variation	0.089
Texture Consistency	0.787

### BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.523
Brightness Variance	0.193
Brightness Uniformity	0.631
Brightness Skewness	-0.078
Brightness Entropy	7.588
Rms Contrast	0.193
Michelson Contrast	1.0
Weber Contrast	0.675
Mean Local Contrast	0.075
Contrast Uniformity	0.589
Dynamic Range	1.0
Effective Dynamic Range	0.62
Shadow Percentage	20.586
Midtone Percentage	52.9
Highlight Percentage	26.514
Shadow Clipping	0.002
Highlight Clipping	0.001
Tonal Balance	0.334
Fine Contrast	0.046
Medium Contrast	0.091
Coarse Contrast	0.094
Multiscale Contrast Ratio	0.492
Edge Contrast	0.536
Contrast Clustering	0.213

## SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.692
Color Clustering	0.7
Color Transition Smoothness	0.0
Transition Uniformity	0.166
Sharp Transition Ratio	0.1
Transition Directionality	0.007
Mean Saturation	0.373
Saturation Variance	0.036
Low Saturation Ratio	0.371
Medium Saturation Ratio	0.579
High Saturation Ratio	0.05
Saturation Clustering	0.996
Hue Concentration	0.32
Complementary Balance	0.117
Analogous Dominance	0.5
Temperature Bias	-0.268

## 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). Luigi — Catalog raisonné. <https://arnaudquercy.art/en/catalogue-raisonne/AQC0479.html>
- [2] Quercy, A. (2025). Untitled - Gallery. [https://artquamanima.com/en/artworks/2023/01/luigi\\_5ei.html](https://artquamanima.com/en/artworks/2023/01/luigi_5ei.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

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

## CHECKSUM (SHA-256)

a596886e4492281d7cdce020e5fa7e147b20ba6f47f2ece29af0cc23f71eef-d8

Artist	Arnaud Quercy
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Collection	Mediterranean Echoes
Certificate	20231231-0066
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