AQC0504

Nanopublication — Computational Image Analysis - AQC0504

by Arnaud Quercy · The grumpy Pigeon of Cap Town - South Africa · 2023

Claim 1: Computational Image Analysis - AQC0504

> K-means clustering analysis [3] (10 colors) performed on artwork The [1] grumpy Pigeon of Cap Town - South Africa (AQC0504) [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]: 1516x2048 pixels. Analysis date: 2026-02-04.

COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		CBBCA9	31.0	yellow-orange	silver
2		D5C8B5	26.7	yellow-orange	lightgray
3		4A5044	8.1	yellow-green	darkslategray
4		D7A679	6.2	orange	burlywood
5		A98054	6.2	orange	peru
6		6B7065	5.8	yellow-green	dimgray
7		2D2920	5.3	yellow-orange	very dark gray
8		A59881	5.3	yellow-orange	rosybrown
9		865B35	4.2	orange	burnt sienna
10		7C9FB0	1.1	blue	lightslategray
11		180A00	0.3	red-orange	black [Accent]
12		A5C3CB	0.3	blue-green	lightsteelblue [Accent]

Color Families:

Family	%
yellow-orange	68.3
orange	16.6
yellow-green	13.9
blue	1.1
red-orange	0.3
blue-green	0.3

Accent Colors:

Hex	Family	Name	Chroma
180A00	red-orange	black	7.8
A5C3CB	blue-green	lightsteelblue	10.6

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.196
Mean Local Roughness	0.01
Roughness Uniformity	0.018
Edge Density	0.029
Mean Gradient Magnitude	0.097
Gradient Variance	0.045
Gradient Smoothness	0.0
Directional Coherence	0.198
Pattern Complexity	0.117
Pattern Repetition	1.0
Detail Frequency Ratio	0.591
Spatial Variation	0.113
Texture Consistency	0.566

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.633
Brightness Variance	0.196
Brightness Uniformity	0.691
Brightness Skewness	-1.121
Brightness Entropy	6.742
Rms Contrast	0.196
Michelson Contrast	1.0
Weber Contrast	0.611
Mean Local Contrast	0.012
Contrast Uniformity	0.0
Dynamic Range	0.996
Effective Dynamic Range	0.58
Shadow Percentage	11.638
Midtone Percentage	25.385
Highlight Percentage	62.976
Shadow Clipping	0.0
Highlight Clipping	0.0
Tonal Balance	0.0
Fine Contrast	0.005
Medium Contrast	0.015
Coarse Contrast	None
Multiscale Contrast Ratio	1.0
Edge Contrast	0.097
Contrast Clustering	0.434

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.741
Color Clustering	0.756
Color Transition Smoothness	0.743
Transition Uniformity	0.692

Metric	Value
Sharp Transition Ratio	0.1
Transition Directionality	0.195
Mean Saturation	0.24
Saturation Variance	0.024
Low Saturation Ratio	0.76
Medium Saturation Ratio	0.226
High Saturation Ratio	0.014
Saturation Clustering	0.999
Hue Concentration	0.765
Complementary Balance	0.072
Analogous Dominance	0.868
Temperature Bias	0.699

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 grumpy Pigeon of Cap Town - South Africa — Catalog raisonné. https://arnaudquercy.art/en/catalogue-raisonne/AQC0504.html

[2] Quercy, A. (2025). Untitled - Gallery. https://artquamanima.com/en/artworks/2023/01/the-grumpy-pigeon-of-cap-town-south-africa_5o8.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

EPISTEMIC PROFILE

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

CHECKSUM (SHA-256)

4f177299b0fceab4b18cf7d32da0c2b503096e476e5eb1287a0c20e8b5663d-ff

Artist	Arnaud Quercy
Date	2023
Collection	Nature in the city
Certificate	20231229-0091
Asset code	AQC0504
Version	1
Published	2026-04-09

© 2026 Multimodal Institute

Published by: Art Quam Anima Publishing New York LLC — publishing.artquamanima.com

Date of publication: 2026-04-09

Persistent URI: https://multimodal.institute/en/nanopubs/2026/02/AQC0504-computational-image-analysis-aqc0504.pdf

Content available under Creative Commons Attribution-NonCommercial 4.0 License (CC BY-NC 4.0)