

Nanopublication – Computational Image Analysis –
AQC0907

by Arnaud Quercy · E Major – Research on Harmony – Variations 10 · 2025



CLAIM 1: COMPUTATIONAL IMAGE ANALYSIS – AQC0907

Computational image analysis [3] of artwork E Major [1] – Research on Harmony – Variations 10 (AQC0907) [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 2025-12-11.

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]: 1901x1901 pixels. Analysis date: 2025-12-11.

COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		E3D922	18.5	yellow	gold
2		7A91B6	16.0	blue-violet	lightslategray
3		5F543F	13.0	yellow-orange	dark brown
4		786B54	12.1	yellow-orange	dimgray
5		67AFDE	9.6	blue	cornflowerblue
6		9BAFCF	8.4	blue-violet	lightsteelblue
7		5F789F	7.4	blue-violet	grayish purple
8		F3DA88	6.9	yellow-orange	khaki
9		E9DEBE	4.2	yellow-orange	wheat
10		3B3424	3.8	yellow-orange	darkslategray
11		191206	0.3	orange	black [Accent]
12		181A07	0.3	yellow-green	very dark gray [Accent]
13		A4CDC8	0.3	green	lightsteelblue [Accent]
14		D2EAED	0.3	blue-green	white [Accent]
15		1E1C2A	0.3	violet	very dark gray [Accent]

Color Families:

Family	%
yellow-orange	40.1
blue-violet	31.8
yellow	18.5
blue	9.6
orange	0.3
yellow-green	0.3
green	0.3
blue-green	0.3
violet	0.3

Accent Colors:

Hex	Family	Name	Chroma
191206	orange	black	6.3
181A07	yellow-green	very dark gray	10.8
A4CDC8	green	lightsteelblue	14.1
D2EAED	blue-green	white	8.1
1E1C2A	violet	very dark gray	9.8

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.19
Mean Local Roughness	0.034
Roughness Uniformity	0.034
Edge Density	0.177
Mean Gradient Magnitude	0.264
Gradient Variance	0.113
Gradient Smoothness	0.0
Directional Coherence	0.013
Pattern Complexity	0.125
Pattern Repetition	1.0
Detail Frequency Ratio	0.673
Spatial Variation	0.111
Texture Consistency	0.662

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.585
Brightness Variance	0.19
Brightness Uniformity	0.675
Brightness Skewness	-0.176
Brightness Entropy	7.442
Rms Contrast	0.19
Michelson Contrast	1.0
Weber Contrast	0.594
Mean Local Contrast	0.038
Contrast Uniformity	0.046
Dynamic Range	1.0
Effective Dynamic Range	0.58
Shadow Percentage	9.379
Midtone Percentage	55.137
Highlight Percentage	35.484
Shadow Clipping	0.005
Highlight Clipping	0.002
Tonal Balance	0.168
Fine Contrast	0.018
Medium Contrast	0.046
Coarse Contrast	0.056
Multiscale Contrast Ratio	0.326
Edge Contrast	0.264
Contrast Clustering	0.338

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.711
Color Clustering	0.501
Color Transition Smoothness	0.324
Transition Uniformity	0.243
Sharp Transition Ratio	0.1
Transition Directionality	0.021
Mean Saturation	0.449
Saturation Variance	0.049
Low Saturation Ratio	0.251
Medium Saturation Ratio	0.559
High Saturation Ratio	0.19
Saturation Clustering	0.998
Hue Concentration	0.18
Complementary Balance	0.227
Analogous Dominance	0.577
Temperature Bias	0.041

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 (2025). E Major - Research on Harmony - Variations 10 - Catalog raisonn  . <https://arnaudquercy.art/en/catalogue-raisonne/AQC0907.html>

[2] Quercy, A. (2025). Untitled - Gallery. https://artquamanima.com/en/artworks/2025/11/e-major-research-on-harmony-variations-10_icv.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

chromesthetic mapping

E Major harmony

synesthetic exploration

acrylic painting

color-pitch correspondence

geometric composition

harmonic translation

musical visualization

EPISTEMIC PROFILE

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

CHECKSUM (SHA-256)

c89cb8244a2644f03ca3eb35acae2217ecdcd0a26b3d52f9caa87650a348522f

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Artist	Arnaud Quercy
Date	2025
Collection	Synesthetic Explorations
Certificate	20251123-0103
Asset code	AQC0907
Identifier	NAN-COL000060
Version	1
Published	2026-02-03

ISSN: [pending – Library of Congress]

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Published by Art Quam Anima Publishing New York,
an imprint of AQA PUBLISHING LLC

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

publishing.artquamanima.com

Last updated: 2026-06-03

Persistent URI: <https://multimodal.institute/en/nanopubs/2026/02/AQC0907-computational-image-analysis-aqc0907.pdf>