

# SAMVAR SHAH

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## Medium

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Digital & Computational Math Art (Generative Art, Cultural Fusion)

## Artistic Focus

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My work amalgamates coding, art, mathematics, and culture. I use algorithms as a medium to reinterpret nature and heritage, including endangered folk art forms—especially *Rogan Kala*—through generative design and digital re-imagination. By integrating computation with traditions, I aim to bridge the past and the future.

## Signature Initiative: AlgoThreads (2024–Present)

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An initiative I founded to apply computational art to cultural preservation, entrepreneurship and social empowerment. AlgoThreads is the platform for my artistic creation, research, and community engagement.

## Cultural Preservation (Rogan Kala Project)

- Collaborated with Padma Shri awardee Gafur Bhai Khatri to create a generative model and digital archive for the 300-year-old Rogan Kala art form. Padma Shri is one of India's highest civilian honors.
- Developed a computational framework adaptable to other endangered craft forms, potentially serving as a preservation blueprint for artisan communities worldwide.

*Endorsement:* “Your work to keep our traditional art alive, to preserve its essence and to pass it on to the next generation feels deeply meaningful.” – Khatri (See Appendix A)

## Community Empowerment (Nisarg Foundation)

- Designed and led free algorithmic art workshops for first-generation learners, making computational art accessible.
- Focused on breaking gender stereotypes and creating pathways for women's entrepreneurship through art.

*Endorsement:* “He brought dignity to their curiosity and belief to their efforts.” – Nidhi Chaturvedi, Executive Director (See Appendix B)

## Entrepreneurship and Public Engagement

- Established a commercial presence on Amazon (Fashion and Home)
- Founder and author of an algorithmic art blog (thecodeofnumbers.com)
- Raised \$4k through Art for Action donation drive for charitable causes
- Online presence: samvarshah.com/algothreads

## Research

Hybrid Chaotic Systems for Algorithmic Art: A Novel Framework for Generative Visuals

This research introduces a novel framework by merging Lorenz, Ikeda, and Hénon chaotic systems into a hybridized, weighted vector field. It expands the complexity and aesthetic range of my artistic practice by enabling advanced techniques like spatio-temporal morphing and AI-driven procedural generation.

[https://www.samvarshah.com/\\_files/ugd/8c865b\\_2794edf753aa474c8fce744432722716.pdf](https://www.samvarshah.com/_files/ugd/8c865b_2794edf753aa474c8fce744432722716.pdf)

## Exhibitions

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2025, 11th International Youth Art Exhibition, CICA Museum, Gimpo, South Korea, submitted

## National Press

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Featured in *Edex Live* (Indian Express): Code Couture: Bengaluru teen transforms algorithms into art and a movement for global empowerment

(October 12, 2025)

## Technical Skills

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**Programming:** Python (numpy, matplotlib, turtle, pillow, blender, pytorch)

**Concepts:** Generative Art, Algorithmic Design, Cross-Cultural Collaboration

## Appendices

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**Appendix A:** Letter of Endorsement — Gafur Bhai Khatri, Master Artisan, Rogan Kala

**Appendix B:** Letter of Endorsement — Nidhi Chaturvedi, Executive Director, Nisarg Foundation



## Ideal Lingua Translations

ALL WORLD LANGUAGES SOLUTION

(ISO 9001:2015 CERTIFIED)

Registration No.: 1513

[Logo]

### *The Traditional Rogan Art*

Dear Samvar,

For more than seven generations, our family has preserved the heritage of Rogan art. Preparing the coloured paint from heated castor oil and carefully applying it on cloth with a delicate stylus, carries with it the memory and blessings of our ancestors.

But this path has never been easy. Over time, interest and demand gradually faded. People's attention shifted from handicrafts to machine-made goods. Many young people, in search of stable income, left traditional crafts altogether and pursued other sources of livelihood. In my own life too, there were many incidents and moments when I asked myself—can this art survive into the future? For days, I set aside food and sat in the dim light of an oil lamp, wounded in both body and spirit, holding on despite everything, only to breathe life into this tradition.

That is why, it brings me immense joy to see the work you are doing to promote Rogan art. In this technological age as well, your work to keep our traditional art alive, to preserve its essence and to pass it on to the next generation feels deeply meaningful. Continue your work.

With blessings,

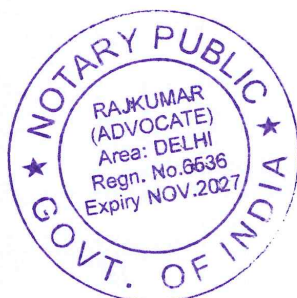
[Signed]

Gaffar Bhai Khatri, Sumar Bhai Khatri

Rogan Artist – Guardian of a Living Tradition

Padma Shri Award Winner (2019)

ATTESTED  
NOTARY PUBLIC  
DELHI INDIA



Certified Translation

For Ideal Lingua Translations  
Prep. / Auth. Sign.

04 OCT 2025

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The

# Traditional Rogan Art

**પ્રિય સમ્બર,**

સાતથી વધુ પેઢીઓથી અમારા કુટુંબે રોગન કલાનું દોરું સંભાળ્યું છે. તેલથી રંગ તૈયાર કરી, તેને ગરમ કરી, સૂક્ષ્મ સળીયાથી કપડાં પર દોરાતી દરેક વળાંક અમારા પૂર્વજોની યાદ અને આશીર્વાદ લઈને આવે છે.

પરંતુ આ માર્ગ સહેલો ક્યારેય ન રહ્યો. બજાર ધીમે ધીમે ઘટતું ગયું, લોકોનું ધ્યાન હસ્તકલા પરથી મશીન બનાવટ તરફ વળતું રહ્યું. ઘણા યુવાનો સ્થિર આવક માટે અન્ય કામઘંઘા તરફ વળી ગયા. મારા જીવનમાં પણ અનેક પ્રસંગો આવ્યા જ્યારે મનમાં પ્રશ્ન થયો — શું આ કળા આગળ જીવંત રહી શકશે? કેટલાય દિવસો ભોજન છોડીને, આંગળીઓ ઘાયલ કરીને કે કલાકો સુધી દીવાના ઝાંખા પ્રકાશ હેઠળ બેઠો છું, માત્ર આ પરંપરાને શ્વાસ આપતો રહ્યો છું.

તમે રોગન કલાના પ્રસાર માટે જે કાર્ય કરી રહ્યા છો તે જોઈને મને ખૂબ આનંદ થયો છે. ટેકનોલોજીના આ યુગમાં પણ, તમને આપણી પરંપરાગત કલા સ્વરૂપોમાં રસ લેતા અને તેને જીવંત રાખવા માટે કામ કરતા જોઈને ખૂબ સારું લાગે છે. તમારું કાર્ય ચાલુ રાખો.

**આશીર્વાદ સાથે,**

ખત્રી સુમર દાહિદ

ગફ્ફાર ભાઈ ખત્રી, સુમરભાઈ ખત્રી

રોગન કલાકાર — જીવંત પરંપરા સંઘર્ષયાત્રી

પદ્મશ્રી પુરસ્કાર વિજેતા (2019)



For Ideal Lingua Translations

Prop. / Auth. Sign.

## Appendix B: Letter of Endorsement — Nidhi Chaturvedi, Executive Director, Nisarg Foundation



### LETTER OF RECOMMENDATION

July 24, 2025

**To Whomsoever It May Concern,**

This letter serves as a formal recognition of the outstanding contribution made by Mr. Samvar Shah to our institution through his recent workshop on Algorithmic Art.

When we first heard from Samvar Shah, we honestly weren't sure what to expect. He had reached out with an idea to run a workshop on algorithmic art, a term that sounded more like science fiction than something we'd ever imagined for our classrooms. Most of our students don't have regular access to computers. Many are first-generation learners. Coding, Python, digital art... it all felt worlds away. But Samvar had a way of speaking that made you pause. He wasn't trying to impress. He just truly believed this could work. And because he believed it so deeply, we decided to give it a shot.

From the outset, Samvar led the sessions with remarkable calm and gentleness. His presence helped students, especially those who are usually shy or hesitant, feel at ease and open up. This was critical, especially because he was introducing a topic that was entirely unfamiliar. Algorithmic art is a highly technical concept, and we must remember that many of our students have very little exposure to coding, mathematics, or even digital tools. And yet, he made it not only accessible, but exciting and deeply creative for everyone.

He held space for every question, no matter how simple or complex, and met students exactly where they were. His sessions included complete end-to-end guidance: from explaining what algorithmic art is, to showing them how to generate it without prior knowledge of coding or math. He even provided easy-to-use templates. He didn't stop there, he went all the way to showing how one can make products using their designs and practically demonstrated how to monetize their art.

Most important of all, this workshop subtly but powerfully broke gender stereotypes. Girls who had never imagined themselves engaging with computers or coding were leading sessions, experimenting with tools, and expressing bold ideas. The zero-capital opportunities he introduced opened new pathways for livelihood, and the students saw, many for the first time, how technology could be a tool for women's entrepreneurship.



#### NISARG AGRIPRENEURSHIP FOUNDATION

DELHI - BHOPAL

CIN: U85300MP2019NPL049555, GST: 23AAGCN6816Q1ZY

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By the end of the workshop, the impact was undeniable. The students loved it. They asked for more. Each one left with resources, skills, and a new sense of confidence. What Samvar brought to our classroom was far more than just technical knowledge. He brought dignity to their curiosity and belief to their efforts.

We extend our heartfelt gratitude to Mr. Samvar Shah for his dedication, innovation, and commitment to making education inclusive, creative, and empowering for all.

Warmly,

A handwritten signature in blue ink, appearing to read "Nidhi", with a horizontal line drawn underneath it.

Nidhi Chaturvedi  
Executive Director



**NISARG AGRIPRENEURSHIP FOUNDATION**

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