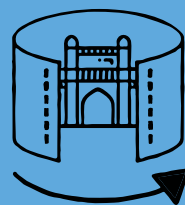
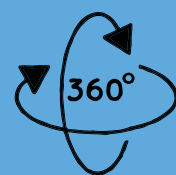
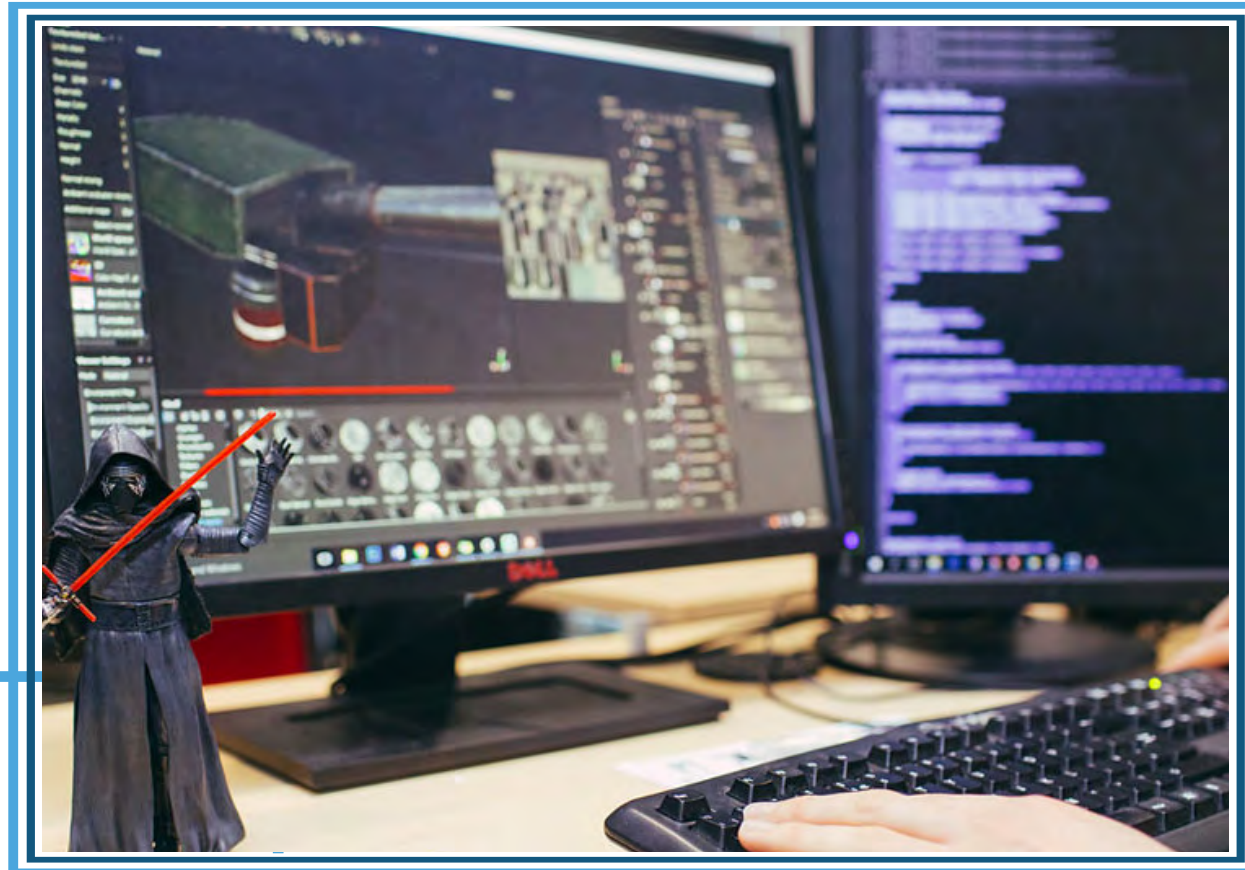


# VIZARA

IMMERSIVE | INTERACTIVE | INTELLIGENT





# The Company

**VIZARA OFFERS DIGITAL SOLUTIONS IN VARIOUS DOMAINS SUCH AS HERITAGE PRESERVATION, TOURISM, EDUCATION, ENTERTAINMENT, INFRASTRUCTURE, NEW MEDIA AND SMART CITY GOVERNANCE**

Vizara is a start-up company working at the confluence of cutting-edge technologies including virtual reality (VR), augmented reality (AR), artificial intelligence (AI) and 3D printing. Vizara offers solutions in various domains such as heritage preservation, tourism, education, entertainment, infrastructure, new media and smart city governance.

Founded by entrepreneurs holding PhDs from IIT Delhi, IIT Kharagpur and MIT, Vizara was incorporated with a goal to explore a unique experiment of translational technology development based upon the outcomes of Indian Digital Heritage (IDH) - a research project of the Department of Science and Technology (DST), Government of India. IDH was

a DST initiative supporting collaborative projects between researchers in the areas of technology and humanities for the digital documentation and interpretation of tangible and intangible heritage of Hampi, a UNESCO World Heritage site in South India.

We have combined technical and entrepreneurial skills with top academic research experience and co-founded Vizara with a vision to translate the outcomes of the IDH project to other heritage monuments and sites in India and abroad. IIT Delhi, helped us by providing an incubation space, mentorship and guidance to take initial steps towards building a successful company. Currently we are associated with NASSCOM.



## Integrity

We are honest, transparent and committed to doing what is best for our customers. We adhere to our word.



## Innovation

We are passionate about learning and seek to constantly improve and innovate. We follow an iterative process to achieve our goals. We learn from others and from our challenges and successes.



## Commitment

We set a high bar professionally, believe nothing is impossible, and commit ourselves fully to our objectives. We focus on a few key priorities and ensure we deliver with quality on time - every time.

## Values of Our Company

- Integrity
- Smart and Innovative Work
- Commitment to deliver 100%
- Zeal to adapt and improve

- To be seen at the forefront of new age technology.
- To map each global heritage site into the digital space through documentation, preservation and conservation.
- To use a combination of AR, VR, 3D and AI to offer solutions for tourism, education, retail, infrastructure, entertainment and new media.

## Vision & Mission





## Our Services

Vizara offers digital solutions in various domains

- 3D models of places, objects and people – physical & virtual
- AR enabled 3D printed replicas
- AI based Virtual and Mixed Reality applications
- VR content and APPs for Head Mounted Devices (HMDs)
- VR based simulations and training modules
- Digital archiving of intangible knowledge including heritage
- Smart Site Tours personalized using AI
- AI based Recommendation Systems
- Mobile AR APPs for museums and sites
- New Media installations for museums

“

## We offer indigenous and innovative products

currently focusing on the Heritage space, using cutting edge technologies such as **Augmented Reality (AR)**, **Virtual Reality (VR)** and **Mixed Reality (MR)**, **Artificial Intelligence (AI)** and **3D printing**.

These products offer interactive and intelligent interfaces & create immersive experiences built around places, objects, people & communities.

”

- **Culture and Tourism - Heritage Experiences**
- **Education, Training and Entertainment**
- **Architecture, Real Estate**
- **Industry 4.0, Retail, Advertising, Marketing**

*Holographic Projection of Ancient Dance Form*



## Culture and Tourism Heritage Experiences

Today, our heritage, both tangible and intangible, faces a very real risk of being eroded from our physical and mental landscape due to natural and manmade threats. It has become imperative to take immediate action and this is our motivation to work in and promote the concept of e-heritage.

Vizara has been working with the Department of Science and Technology, Ministry of Culture, Archaeological Survey of India and other agencies of Government of India to create digital heritage installations using AR/VR/MR, AI and 3D Printing technologies.

Our multi-disciplinary team of professionals includes software developers, architects, 3D artists, fabrication engineers and project managers collaborating with historians, story-tellers, craftsmen and designers to build multi-faceted, immersive, informative and interactive experiences of art, architecture, culture and history.



*3D Printed Replica; Sun Temple Konark*





*Interactive 3D Virtual Walkthrough*



*Mixed Reality Installation*



*Immersive Virtual Reality Experience*

### 3D Models of Monuments and Sites

We create digital models of monuments from laser-scanned data (point clouds), using CAD modelling and mesh generation. With our expertise in 3D sculpting and texturing we render realistic virtual replicas of monuments to be used as assets in virtual walk-throughs and VR experiences.

### 3D Digital Reconstruction of Damaged Parts

We use a collaborative approach for conjectural reconstruction of broken parts of monument structures, sculptures and artefacts, wherein historians and conservation architects provide inputs to our modelling and fabrication team. Digital merging of these conjectural reconstructions with existing structures provides validations for physical conservation efforts.

### 3D printed true-scale Monument replicas

We have extensive 3D printing experience and skills to reproduce true-scale replicas of monuments and artefacts of any size – from a room-scale model of a monument site to a table-top reproduction of a structure to a hand-held small replica for gifting - with perfect scaled-down dimensions. These gifts are augmented with conjectural reconstruction for ruined and damaged artefacts and have information provided through AR based mobile apps.

### History in Holograms

We create magical experiences of history, taking the user back in time and space by reproducing ancient rituals and performing arts through 3D holographic videos - real and animated - created using green screen

and motion capture technologies. Projected inside 3D fabricated monument replicas, these videos provide a real-life experience of the period to the visitor.

### Interactive Museum Installations

Vizara ViRaasat is the name of a unique heritage installation developed by Vizara, which combines our niche confluence of AR, VR, 3D printing and AI technologies. It includes a kiosk with projection systems, vision equipment and interaction tools. It houses a scaled-down 3D printed replica of a site. Amongst the varied mixed-reality e-heritage experiences it offers, are multilingual 3D virtual tours, 3D projection mapping shows and interactions with the installation using gaming interfaces.

### Heritage in VR Headsets

We have created VR experiences of many heritage sites including Hampi temples, Kashi Vishwanath temple, Taj Mahal and Sabarmati Ashram. These include walk-throughs with a gaming interface in VR headsets such as HTC Vive, as well for Samsung gear and Google cardboard. The content includes real-life 360 VR videos and computer generated animations with true-scale 3D models.

### AR Apps for Museum and On-site tours

We work with the 3D content of the monument sites and produce AR apps for on-site and museum tours. A tourist can use our app and point his or her phone towards an artefact or structure and get information and trivia about it. S/he can also see how a damaged structure may have looked like in the past, and also other similar pieces of art and architecture of the same style.

# INFOTAINMENT

## Education, Training & Entertainment



*Interactive Medical AR Application*



*AR Enabled Training Module for large equipment and machinery.*

### History Labs

We propose history labs for educational institutes to change the way history is taught. These include setting up Interactive Heritage Installations and offer immersive VR experiences, Holographic and 3D projections of monuments. Students can learn history in gaming environments leading to more excitement and better retention.

### AR enabled courses and books

Vizara boosts learning by creating AR apps for course books. Students can point their phone or tablet to a printed science book and see the video of an experiment in Science; learn Maths through visualization of an equation; see enactment of a play in English; or visit a history site through actual site pictures and guided tours.

### VR based Training modules and simulations

Vizara creates VR based interactive training videos and simulations – for school lessons, driving, flying, industry processes, workshop repairs, fixing appliances, etc. These immersive experiences simulate realistic environments and allow training in all possible combinations of situations.

### 3D Assets / Models for Gaming and Animations in Movies

Our experienced and highly creative team of 3D artists and modelers has the capability to create realistic and imaginative 3D assets for gaming and animated movies. New media entertainment is our expertise.



## Architecture, Real Estate

### Architectural models of Buildings – immersive and interactive

Using the Vizara ViRaasat concept, architects and builders can show scaled-down 3D fabricated physical models of buildings and sites which speak to the viewer through interactive virtual walk-throughs, 3D projections, AI guided views and tours.

For example,

(a) Using voice commands, they can show the buyer the sunset view from a sample flat on the 30th floor on the north-east side of the complex; the flat is done up in muted colours and contemporary interiors as per buyer's choice; location of the flat is lighted up in the physical model at the same time. (b) They can laser-point a path on the physical model, say from a chosen building to the Club and show on screen a simulated street view of moving along that path in the complex.

### AR Technology

Viewers can point their phones towards the physical replica of a building complex or the site marketing material and get audio-visual information about the construction and infrastructure. They can watch a sample flat or the club appear, and get more information, pictures, audios, videos about everything they point the phone to.

### VR Experiences

These include interactive VR tours of the building complex, residential units, entertainment facilities etc. Buyer can get immersed in a realistic, virtual experience of the complex, take a virtual tour of the sample flat, change its furniture, colors and time of day; and make an informed choice to buy.



Interactive AR Visualisation



Immersive AR/VR Experiences

## Industry 4.0, Retail, Advertising, Marketing

### 3D content for Company Websites and Applications

We create realistic 3D models of products from images or laser-scanned data and convert 2D content of websites and applications to 3D, adding AI components for personal recommendations.

### AR Enabled Retail Experiences

We create mobile AR apps for retail stores, which provide augmented information for products on display. The app on pointing the phone to a displayed product provides nutritional details of a food item, tech specs of a TV model, USP of an oven, dimensions of a garment.

### AR Enabled Marketing Material

We create AR apps for marketing literature. 3D models of products pop up on pointing a mobile phone or tablet at its picture in the brochure; Videos of launch events, CEO interviews pop up from the brochure. It's a new age marketing tool.

### Digital Experience and VR Tour of a Facility

We create 3D holograms of products and holographic videos of brand ambassadors and company heads which can be shown at an event or in company offices and showrooms. We create 360 VR experiences to be shown to clients at exhibitions and fairs – marketing capabilities with cutting edge tech.

### 3D Printed Corporate Gifts

We create customised 3D printed corporate gifts which can be replicas of company products, logos or trademarks, or ethnic true-scale heritage memorabilia with company branding.



AR Enabled Retail Experiences



3D Printed Memorabilia



# 1<sup>st</sup> International Heritage Symposium & Exhibition (IHSE) 2020

The First International Heritage Symposium and Exhibition (IHSE) 2020, held at the National Museum, Janpath, on 15th and 16th January, 2020, was jointly organized by the Department of Science and Technology (DST), Government of India (GoI), IIT Delhi and Vizara.

The event brought together international communities from diverse disciplines such as science, technology, culture, and social sciences engaged in conservation, preservation and management of World Heritage in physical and digital space. The exhibition, primarily of Vizara's products was displayed in the Special Exhibition Hall of the National Museum, and showcased Digital Heritage exhibits incorporating the AR, VR, MR, AI, and 3D Printing technologies.



3D Printed Replica; Hazara Rama Temple

[Watch Video](#)



[Watch showreel here](#)

Vizara has created mixed reality installations called **ViRaasat installations** of five Indian monuments, four of which are UNESCO World heritage sites — **Taj Mahal and Kashi Vishwanath temple in Uttar Pradesh, Konark Sun Temple in Odisha, Rani Ki Vav (a stepwell) in Gujarat and the temples of Hampi in Karnataka.**

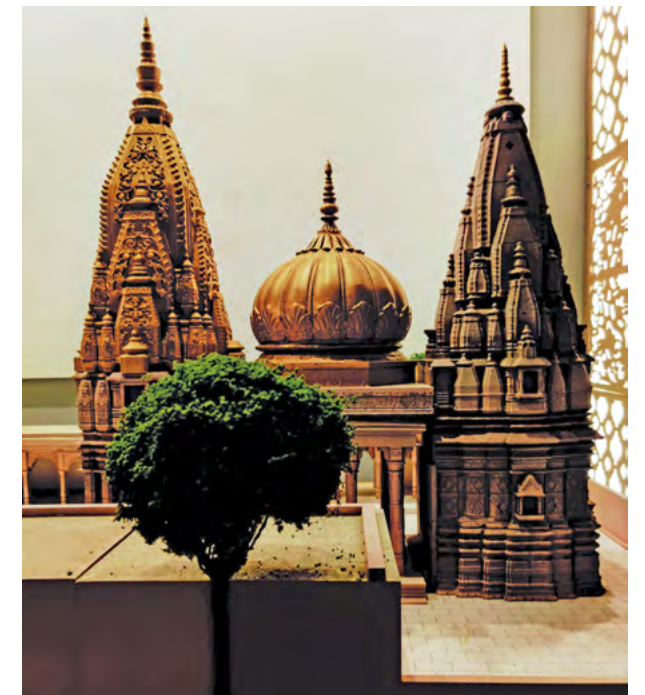
These include true-to-scale 3D printed models of these sites created from laser scanned data. These large 3D physical and digital installations make it possible to get a virtual guided tour of the Konark Sun Temple, watch a projection mapping show on Taj Mahal model, watch artis at the Kashi Vishwanath

temple and enjoy holograms of dancers performing inside 3D fabricated models of Hampi monuments. These ViRaasat installations feature large screens, hand-held controllers and laser-pointers allowing visitors to get a virtual interactive experience of walking through these monuments. They transform the way people can experience and learn about these sites.

Ancient rituals and festivals have been brought to life with Augmented Reality (AR). A user can point their tablets or smartphones to the replica of a site or ancient painting and get more information about it on the handheld device.



Water Simulation through projection mapping in Rani Ki Vav ([Watch Video](#))



3D Printed Replica; Kashi Vishwanath Temple ([Watch Video](#))

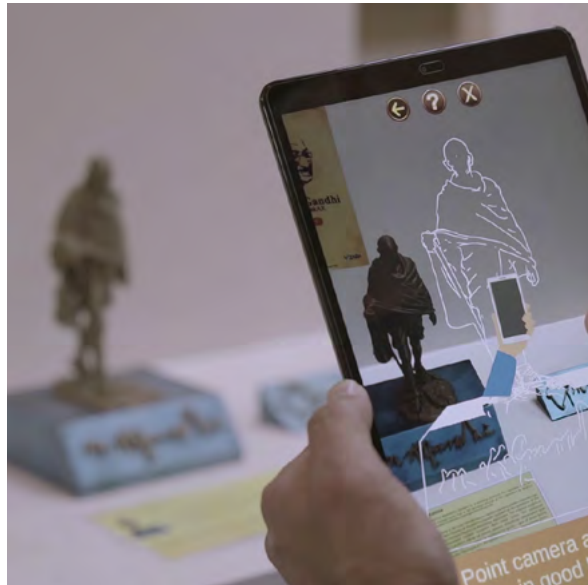


Mixed Reality Installation / 3D Printed Replica; Taj Mahal ([Watch Video](#))



Mixed Reality installation/ 3D Printed Replica; Sun Temple Konark ([Watch Video](#))





AR Enabled 3D Printed Replica

Vizara set up a digital exhibition at the DST office as part of the government plan to commemorate the 150th birth anniversary of Mahatma Gandhi. Vizara exhibits showcased at this “**Digital Gandhi Gyan-Vigyan Exhibition**” include:

#### ViRaasat Sabarmati Ashram

A Mixed Reality installation with a 3D fabricated physical model of the famous Sabarmati Ashram, in Ahmedabad, with an interactive virtual walk-through and a guided tour.

#### Sabarmati VR Experience

An immersive Virtual Reality experience in a head-mounted device or VR head-set – a Treasure Hunt at the Sabarmati Ashram.

#### Models of Gandhiji’s utensils

With an AR experience showcasing his experiments with food, his changing food habits over time and the science behind his food choices.

#### Gandhiji’s letter replicas

Mounted on a wall, augmented by an AR app to show related text, images, videos, etc.

#### 3D Printed Gandhi Mementos

Gandhi Statue and Signatures augmented with an AR app.

## Digital Gandhi Exhibition



AR Based Interaction with Real-World Objects



Gandhiji Ashram VR Experience

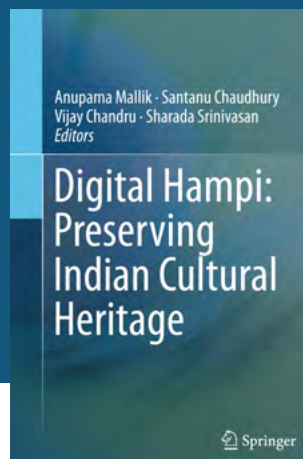
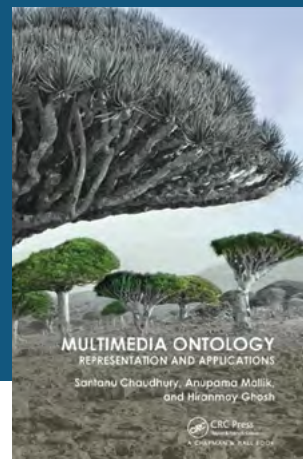


AR Based Interaction with Real-World Objects

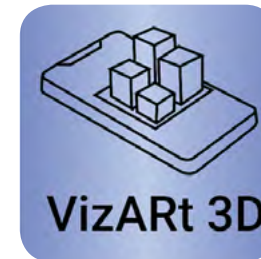


## Books & Publications

Vizara founders with PhDs in Computer Science related subjects, have published in International journals and co-authored and co-edited books on computational technologies in Artificial Intelligence and Heritage Preservation.



## Vizara Tech Apps



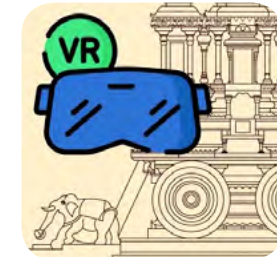
VizARt 3D

VizARt 3D App is a proof of concept that brings together the cultural, architectural & historical immersion of a UNESCO world heritage site along with the engagement of learning about important scientific fundamentals using the site as a stage and tool.



Digital Gandhi Akar PrakAR

This AR app, "Digital Gandhi Akar PrakAR" can be used by pointing the camera of an android device (phone or tablet) at the Gandhi statue. This app provides an insight into Mahatma Gandhi's life and personality.



ChariotVR

Explore the complex of the famous Vijaya Vittala temple at Hampi and various facets of its famous Stone Chariot through this app. Virtually visit the inner chamber with beautiful carvings all around.



Digital Gandhi Gyan-Vigyan

This is an Augmented Reality application for the Digital Gandhi Gyan-Vigyan Exhibition.

## Clients & Collaborators



IIT DELHI



IIT BOMBAY



CBRI



राष्ट्रीय डिज़ाइन संस्थान  
NATIONAL INSTITUTE OF DESIGN  
Bengaluru Campus



International Institute for Art, Culture and Democracy



Archaeological Survey of India



KSCST



NASSCOM  
Center of Excellence-IoT & AI  
A MoU Initiative with Govt. of Karnataka, Haryana, Gujarat & AP

## 3D Printed Memorabilia



Vizara Technologies creates 3D printed memorabilia of complex Indian heritage Monuments in various finishes.

[Buy on Amazon](#)



## IHSE VIP Visitors



DG UNESCO Ms. Audrey Azoulay visited the IHSE Exhibition at The National Museum in Delhi

Event launch by Minister of Culture & Tourism, GoI, Shri Prahlad Singh Patel



Exhibition visit by Minister of Science & Technology, GoI, Dr. Harsh Vardhan



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