



## Project 2

# Designing an Experience at Elephanta Caves

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**You don't stumble upon your heritage.  
It's there, just waiting to be explored and shared.**

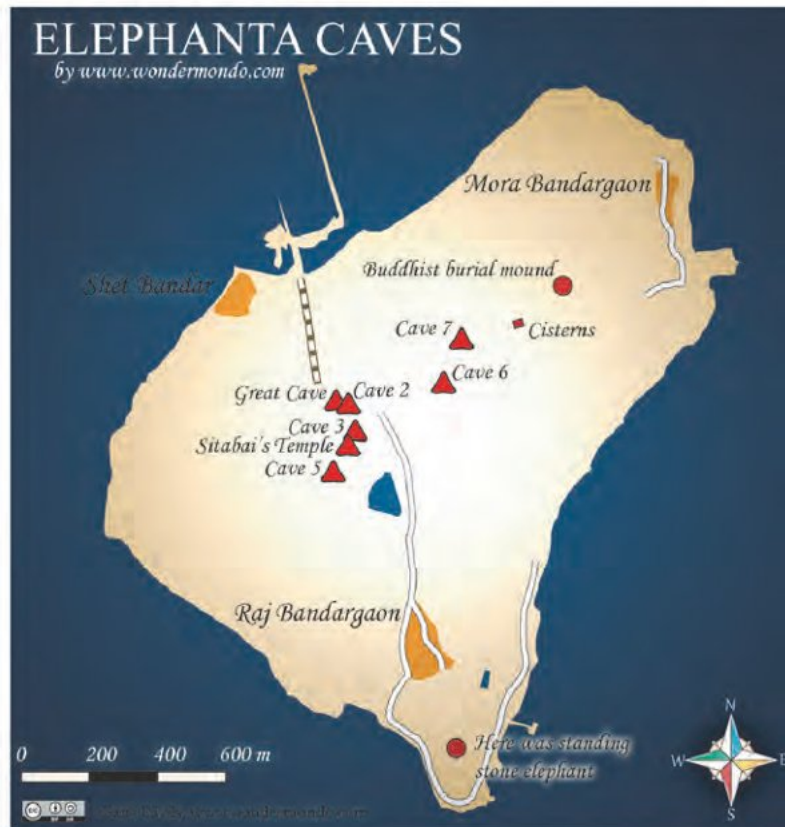
Robbie Robertson





## About 'Elephanta Caves'

Elephanta Caves are series of sculpted caves devoted to Lord Shiva. These caves displays various forms of Lord Shiva and important incidents from Shiva Mythology. It is the most extraordinary piece of art and example of greatest devotion. The caves with symbolic parts and the Shrine was the temple of the almighty and people would come to submit in his devotion. After thousands of years and mindless destruction it still holds the same magic, people still come to him to get lost in his world.



Elephanta map graphical representation.

#### Location -

The caves are located on Elephanta Island, locally known as Gharapuri (literally "the city of caves") in Mumbai Harbour, 10 kilometres (6.2 mi) to the east of the city of Mumbai in the Indian state of Maharashtra. The island, located on an arm of the Arabian Sea, consists of two groups of caves—the first is a large group of five Hindu caves, the second, a smaller group of two Buddhist caves.

The Hindu caves contain rock cut stone sculptures, representing the Shaiva Hindu sect. The rock cut architecture of the caves has been dated to between the 5th and 8th centuries, although the identity of the original builders is still a subject of debate. The caves are hewn from solid basalt rock. All the caves were also originally painted in the past, but now only traces remain.





Local tradition holds that the caves are not man-made. Rather it was built by the great 'Pandavas' or the demon devotee of Shiva 'Banasura'. the island was passed down through many attributors or rulers from the 'Badami Chalukyas', 'Konkan Mouryas', 'Rashtrakutas' till 'Portuguese' rule began in 1534.

The Portuguese called the island Elephanta on seeing its huge gigantic statue of an elephant at the entrance. The statue is now placed in the garden outside the Bhau Daji Lad Museum (erstwhile Victoria & Albert Museum) at the Jijamata Udyaan (erstwhile Victoria Gardens) at Byculla in Mumbai. This cave was renovated in the 1970s after years of neglect, and was designated a UNESCO World Heritage Site in 1987 to preserve the artwork. It is currently maintained by the Archaeological Survey of India (ASI).

## Current Experiences-

The journey to the caves itself is a memorable experience. Since it's an island, tourists have to catch a ferry from Gateway of India (Mumbai). It is approximately an hour's journey 10kms away from the coast of Mumbai.

After getting down from the ferry one can decide to take the toy train for a 10mins..distance or walk. Although many take the Toy train from the port till the entrance of the village.

Now comes the path which leads to caves with steps along with shops selling all sorts of handicrafts and souvenirs. You also come across small food/snacks stalls and hotels. All shops and hotels are run by locals. The walk is about 15mins

Once you reach the entrance of the cave, right in front of the gate there is the ticket counter. Then there is a empty space, often people take rest in that area because of the tiredness of the trek. On the right one can see Cave no. 1 or the Main Cave. Near the entrance, you find a panel which shares information about Elephanta Caves in three languages - Hindi, Marathi and English.

One can start walking to the caves. After entering 1st cave or Main Cave you notice that here are massive carved rock sculptures, 9 panels and a Linga. A walk through the caves is very enchanting. Each sculptural panel just catching your attention and then you get absorbed in the details carved by the sculptor at a larger than human scale. There are total 7 caves, among which 5 are hindu caves and remaining 2 are Buddhist. But the centre of attraction is the 1st cave, dedicated to Shiva this cave has more sculptures and considered to be the complete one, while the other caves are incomplete.

There are other small attractions like 2 cannons (at a trek of 10 mins from cave entrance) and a small dam.





Gateway Of India



Ferry Boat

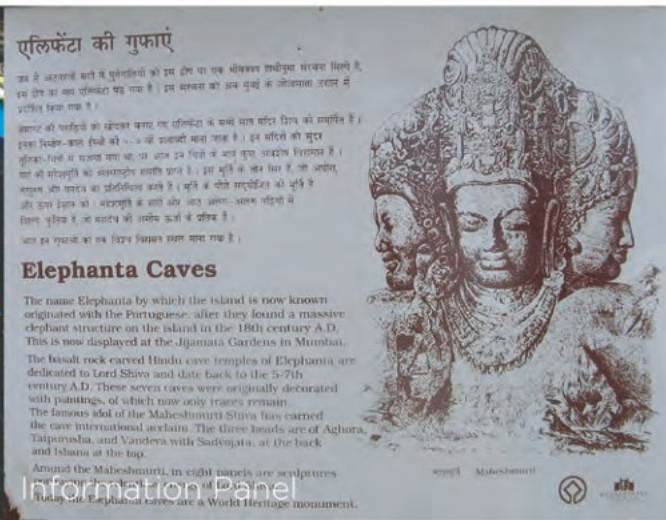


Toy Train

**Nothing can substitute experience. - Paulo Coelho**



Souvenir Shops



Information Panel



Caves

## Primary Research -

### User study-

Location - Elephanta caves

Age Group - 22 - 40

The aim of the user study was to understand what the users feel about elephanta with current experiences. And using that understanding of what they seek to design better experience. I visited the site 3-4 times. First few visits were to just to observe the atmosphere and surroundings. As i was looking through the eyes of information seeker i took the information booklet and personal guide also. For a person like me who was looking for information or data the guide experience was good. The guide shared with me the knowledge he had about the caves.

But during the trip i didn't use the information booklet, i read it while travelling back to home. When i compared the information which guide gave me against the information booklet or internet had, i came to know that although the information was roughly same but the details was different. My guide had given me some wrong details about the sculptures.



## User study-

Location - Elephanta caves

Age Group - 22 - 40

The 3rd visit was to talk to the tourist about their experience at Elephanta. As the tourists were in groups, i took the interview of the groups and not single individual.

One thing which was majorly observed was that tourists were less inclined towards guides or information booklets. Even though the one who took personal guides were happy about the 'Guide Experience' but the number of those people was really low.

When i enquired with the people why they didn't took guide or information booklet. Many reasons came on the surface. Some of the people had no trust over the information guide was providing while others said that the information is easily available on internet.

When i asked them about the information booklet, the answers was that it's too much of reading on the spot and that it's only useful to those who wants to study about the caves.

I could relate to that statement as i had also read the booklet not on the site and i was surely looking for information to study.

Furthermore i came across the group of people who were not interested in information at all. When i asked them why so, they replied with "it's not fun at all. We just want to enjoy with our family." But when i gave them some interesting facts about the sculptures and the stories, the same group of people showed interest and were curious. Important observation here was although they were not interested, once exposed they were inclined or engaged. People are open to new things but it should be fun and engaging.

In other instances people who didn't knew or wasn't interested to know about the stories behind 'Elephanta', the sculptures were just meaningless beauty. The challenge here would be to make the information or the story delivering experience more fun or engaging so everyone can understand the importance of the site.

## User study Results -

### 1. Tourists are not interested too much or too deep information.

#### Statements-

EG-7 Couple ( Male Age - 31)

“Not interested in too much of info; that is for the people who are studying it, not for normal people.”

EG-6 Family ( Male Age - 32)

“Pehle aake dekhenge, thoda janenge, agar interest badha toh jake reserch kareng internet pe.”

EG - 4 Big Family , Male - 38 (mom, dad , wife and son)

“Bass experience lene aye they, not for too much of info.”

### 2. People are open to information when exposed to interesting facts.

#### Statements -

EG - 4 Big Family , Male - 38 (mom, dad , wife and son)

“Ohh! I didn't knew there are stories behind these sculptures!” (When i told a story behind one of the sculpture)

EG - 3 Friends (group of 5 from california)

“Saw the sculptures they are nice but couldn't understand.

Would be interested in stories behind them but for cheap or for free. locals did gave some information it was interesting.”



## User study Results -

### **3. People doesn't believe in current information giving or guide system. Trust internet over current system.**

Statements -

EG - 1 Friends (3 Males, 26 Age)  
"Te phasave vattat (guide), ani kay mahit je information te detayt ti barobar asel"  
(Validity of info) "tyapeksha internet var search karu" (Rather prefer internet over guides | on asking why they said guides must have learned from internet only right? Its not like they have Degree in it.)

"Te kahi pan sell karaycha prayatna kartat paishya sathi"  
(Guide try to sell anything for money.)

EG - 3 Friends (group of 5 from california)  
"Too much of a money laundering schemes."  
"Didn't took guide because again they asked for money. But locals did gave some information it was interesting."

EG - 6 Family (Male - 32, wife and kid )  
from haryana.  
"Why should we take guide or booklet, google has everything and these guide also took the info from google only right!"

### **4. Tourist couldn't understand the sculptures because of semiotic language, bad lighting, missing parts and cluttered composition.**

Statements -

EG - 7 couple | Male - 31  
"Lots of it is in dark space so couldn't see or understand the missing part.  
Should have been complete."

EG - 6 Family (Male - 32, wife and kid )  
from haryana.  
"Didn't understood much but can recognise shiva and parvati temple."

### **5. Entertainment is prime objective**

Almost all the user group replied that the main purpose of the trip is to enjoy.  
And liked the small interactions like toy train, ferry boat etc.

## Insights -

After the user studies it was clear to me that people/tourist doesn't look at historical sites as a place to attain knowledge. Rather entertainment and enjoyment is prime objective. This was one of the important insight. Where again if they don't even understand what they are looking at then the historical site becomes just meaningless to them. A marvelous site like 'Elephanta' has more to offer, it just needs to deliver in a interesting way. Other noticeable insights,

People are not interested in information unless it's engaging and entertaining.

Tourist like to explore and are open for new experiences.

People will not pay for the information if it's available free on the internet.

## Core areas to addressed in the project.

- Creating interest in people about the knowledge 'Elephanta' has, so they can understand what they are looking at.
- Making the knowledge giving experience entertaining and enjoyable.





## Studying various Historical Sites around the world

### Mogao caves, Dunhuang, China

About the project - Animated 3D experience 360-degree panoramic projection theatre. Painterly beauty & underlying narrative meanings. Seeing paintings at one-to-one scale Pure Land immerses visitors in the quintessential heritage of hundreds of Buddhist grotto temples, an art treasury abounding with murals, statues and architectural monuments. This UNESCO World Heritage site, also known as the Caves of the Thousand Buddhas is located at Dunhuang, a small town in northwestern China that is an oasis in the Gobi desert. It was a gateway to and from China on the ancient Silk Road, which carried trade between China, western Asia and India from the 2nd century BC until the 14th century AD for over 1000 years

### Highlights of the Installation

- A 360° virtual reality cave in stereoscopic 3D
- Users can control and navigate through the caves, controlling the experience.
- A strong immersive experience to a protected UNESCO heritage site.
- 3D reconstruction allow exploration of the caves in ways not possible in real life.
- All the buddhas have been recoloured as they originally would have been.
- This Project conception and direction is by Dr. Sarah Kenderdine, Prof Jeffrey Shaw.



## The Irreducible Ensemble : Place - Hampi

### About

Place-Hampi is a groundbreaking new media art installation that elevates cultural heritage to a new level of experience. It is an embodied theatre of participation in the drama of Hindu mythology focused at the most significant archaeological, historical and sacred locations of the World Heritage site Vijayanagara (Hampi), South India. Through the advanced visualization interactive environment a translation of spatial potential is enacted in place-Hampi where participants are able to transform myths into the drama of a coevolutionary narrative by their actions within the virtual landscape and through the creation of a virtual heritage embodiment of a real world dynamic.

### Highlights of the Installation

- 3D stereographic panoramas of an extraordinary site with all its mythological, archaeological, artistic and historic significance.
- Ancient Hampi includes animations of Hindu myths and stories
- An immersive digital interactive space showing panoramic images of the site and its landscape, as well as captivating photography.
- Interactive projection system, invented by Prof. Jeffrey Shaw in 1995





## Unique traits of Elephanta Caves

Marvelous Sculptures -

The Sculptures are the main attractions at Elephanta Caves. Even though they are huge still the details and craftsmanship is incredible.

Understanding of the mythology behind every sculpture and it's semiotic execution is worth a mention.

Mindless destruction and ignorance in preservation has taken its toll on the site. Many of the sculptures are damaged or have their parts missing. There were paintings on the ceiling but because of dripping water through the cracks, one can only see the remaining patches of colour.

If one could travel back in time to see what was it like when the whole monument was intact in its golden days, that will be memorable experience.





Shiva linga



Nataraja

Source - <http://www.theholidayindia.com/blog/wp-content/uploads/2015/11/elephanta-caves-p3213910.jpg>  
<https://www.google.com/culturalinstitute/beta/streetview/elephanta-caves/>

## All other sculptures at Elephanta

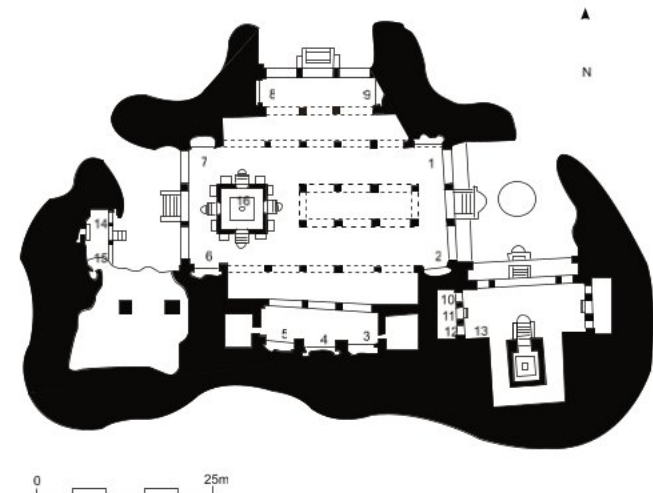
1. Ravanaanugraha
2. Shiva-Parvati, Mount Kailash
3. Ardhanarishvara
4. Sadashiva Trimurti
5. Gangadhara
6. Wedding of Shiva
7. Shiva slaying Andhaka
8. Nataraja
9. Yogishvara

### East Wing Shrine

10. Kartikeya
11. Matrikas
12. Ganesha
13. Dvarapala

### West Wing Shrine

14. Yogishvara
15. Nataraja
16. Linga



Source - [https://en.wikipedia.org/wiki/File:Elephanta\\_Map.svg](https://en.wikipedia.org/wiki/File:Elephanta_Map.svg)





### Stories Behind the Sculptures -

Stories are the core of hindu mythology, there are hundreds of them for each god and each story has thousands of interpretations. In Elephanta, all the sculptural panel have a story behind it.

Each story is capable of grabbing the attention of onlooker, if told in interesting manner.

Thus it is a challenge to provide the information behind the sculptures in interesting manner.

There can be many ways to deliver a narrative, from print, movies to interactive storytelling.

If we deliver the stories with visual support , people can relate much easier. And they feel even more intrigued when they can play a part in whole interaction.

# Designing An Experience - Idea Explorations

## Idea 1

### Problem statement

The sculptures are huge than the human proportion. So it goes above eye level. There are no external lights than natural lights which causes harsh shadows. Onlooker misses the details or can't relate to them.

### Solution

Creating secondary imagery with the same story behind the sculpture accessible in hand. So creating a concept art with story behind the sculpture as a brief.

Which acts as additional layer of information simplifying the semiotic language of sculpture.

This will be in colour so it helps for information bifurcation and better understanding.

The secondary imagery can be augmented over the sculptures using Augmented Reality on phone.

Using Augmented Reality helps here to control the information flow. user can view it according to his preference. And the new medium will create interest in user.



## Chosen Sculpture : Maheshmurti/Trimurti



The most important sculpture in the caves is the Trimurti, carved in relief at the back of the cave facing the entrance, on the north-south axis. It is also known as Trimurti Sadashiva and Maheshmurti. The image, 6 m (20 ft) in height, depicts a three-headed Shiva, representing Panchamukha Shiva. The three heads are said to represent three essential aspects of Shiva: creation, protection, and destruction. The right half-face (west face) shows him as a young person with sensuous lips, embodying life and its vitality. In his hand he holds an object resembling a rosebud, depicting the promise of life and creativity. This face is closest to that of Brahma, the creator or Uma or Vamadeva, the feminine side of Shiva and creator of joy and beauty.

The left half-face (east face) is that of a moustached young man, displaying anger. This is Shiva as the terrifying Aghora or Bhairava, the one whose anger can engulf the entire world in flames, leaving only ashes behind. This is also known as Rudra-Shiva, the Destroyer.

The central face, benign and meditative, resembles the preserver Vishnu. This is Tatpurusha, "master of positive and negative principles of existence and preserver of their harmony" or Shiva as the yogi Yogeshwar in deep meditation praying for the preservation of humanity.



Concept illustration on the basis of detailed information available as before. Acting as an additional layer (Visual Supplement ) for better understanding.

Visual Representation of idea through AR on site.





Concept illustration on the basis of information available to act as a visual supplement for better understanding.



## Idea 2

### Problem statement

Many of the sculptures are damaged or have their parts missing.

### Solution

"What if we recreate the missing parts!"

If we complete or try to revisualize the sculptures, an onlooker will get to experience the complete sculptures.

It can be an experience where user can travel back in time to the era where the sculptures were intact without any damage.

It went further with an idea to to give them human like interactions, "what if sculptures came to life and user can interact with them."

In the first prototype, i tried to complete the sculpture of 'Maheshmurti' with the written data available. And gave it human like movements in a loop, so you see a complete sculpture with expressing face and moving hands.

In this complete experience, if a user is standing in front of sculpture in caves, he can point his phone towards the 'Maheshmurti' and the the complete live sculpture will augment on his screen.

Further to that there will be another features like 'Touch and Tell', in which small buttons can be added on the screen over the sculpture. If user touch it, it will tell the user what it is.

The Idea had its limitations on gathering background data about "how the sculptures would have been, if they were complete." Since there is no visual reference data available from the history. The recreation is possible only through the interpretations of the archeologists. Many of archeologist can have different opinions on same sculptures so the possible data is again open for debate. To take on the project and gathering the proper data in time limit was not possible.





Top Left - Actual 'Trimurti' Sculpture.

Top Right - Visual Representation Of Working AR Prototype.

Bottom Left - Primary working prototype with the complete sculpture Illustrated. The artwork has a loop animated movement and the white buttons act as 'touch and tell' feature.



Complete illustration of the sculpture





### Idea 3

Each sculpture panel in elephanta has a story behind it. Depicting the important events from shiva mythology, every story is attention grabbing and worth telling. But current mediums available (Guide, booklets, panels etc.) at site has less popularity among the tourist. How to tell the stories in interesting way?

#### Solution

“What if sculptures itself start telling you the story behind them.”

What if the current static sculpture start animating and telling you the story about what it is depicting.



Panel Of 'Nataraja' Story

## Ravan Lifting mt. Kailash



### Story

Powerful Demon Ravana, drunk with pride, tried to uproot Kailasa, the abode of Shiva. He managed to shake and lift the mountain, terrifying its inhabitants, whereupon Shiva pressed the toe of his left foot on the ground, as a result of which the mountain settled back to its original position, imprisoning Ravana below. It was only after many prayers and entreaties that Shiva, who forgives as easily as he is angered, released him.

### Description of the panel

- Above is the tall graceful figure of Shiva, the third eye clearly visible on his forehead many of his hands are broken.
- In the sculpture we see projecting cubes that represent the mountain.
- Shiva steadies Parvati with one hand and with two others holds the hair of his attendants in order to keep them from falling.
- Greatly mutilated figure of Ravana
- Ganesha and behind him is a large figure, one of his hands resting on the head of a dwarf. opposite is another similar image.
- Various attendants can be seen, including the emaciated Bhiringi near Shiva's foot.



# Storyborad

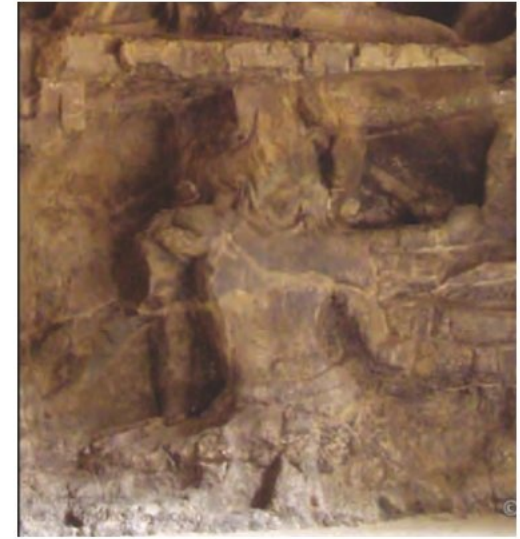
## Frames from animatic

The story will start from sculpture and end on the same current position of sculpture.

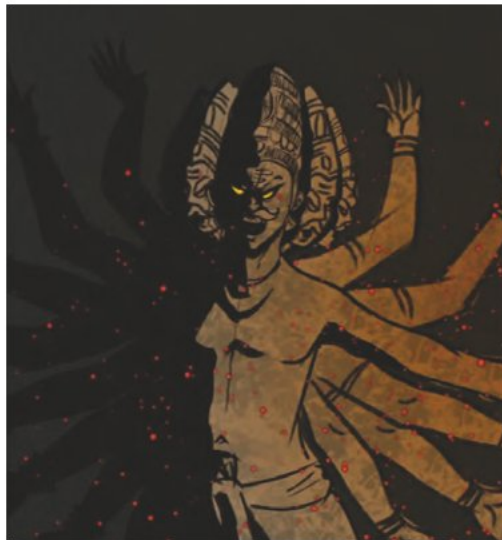
Frames are in 1:1 ratio to match with original sculpture size.



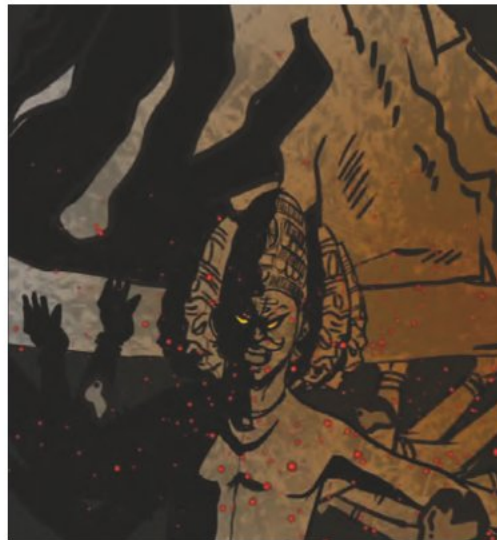
Ravananugraha (title)



Closeup of ravana in sculpture



Demon king Ravana drunk in his pride tried to uproot kailasha the adobe of Shiva



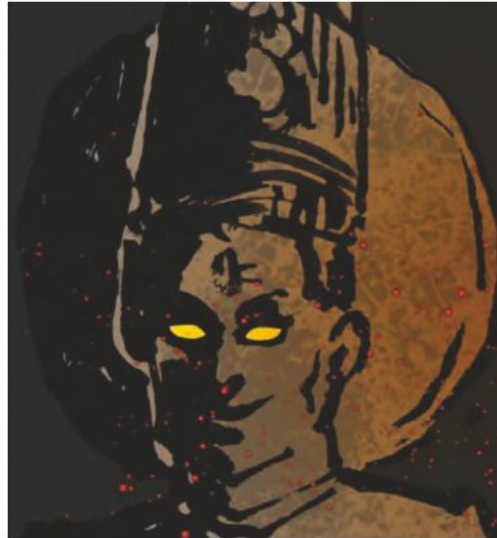
He managed to shake and lift the mountain



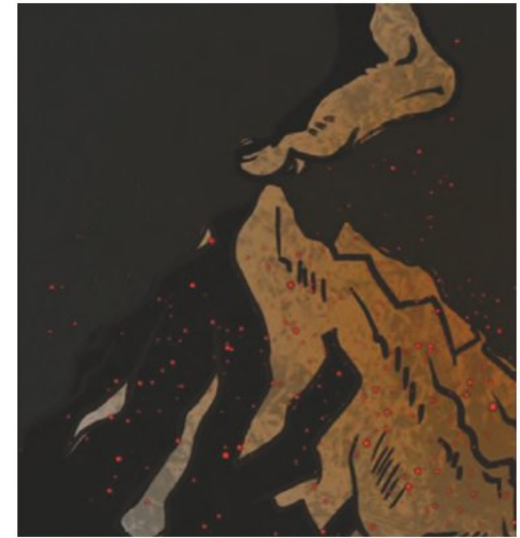
Up on the mountain everyone even Goddess Parvati got worried and leaned towards Shiva

# Storyborad

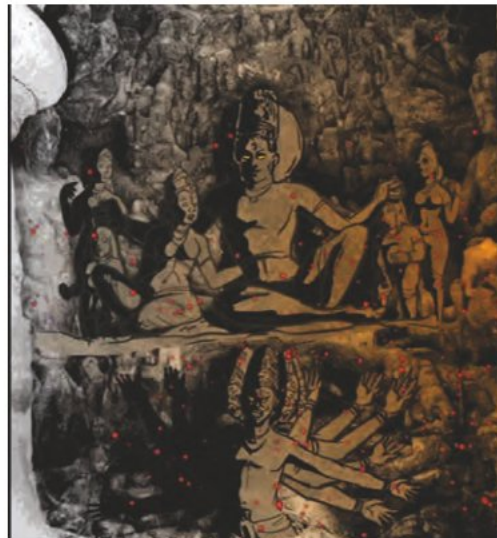
Frames from animatic



But Shiva the almighty was calm



Shiva pressed the toe of his foot  
on the ground



The mountain settled back on  
its original position,  
imprisoning Ravana below it.



Fading back to current sculpture.



## Challenges Ahead -

To animating the story using the sculpture elements from panel.

The animation should be short yet interesting.

The story will start from the sculpture's current position and will end on the same.

### Experience

The animation can be augmented over the sculpture. The user will scan the sculpture with his phone which will trigger the animation. Giving him the information through experience.

User will get to experience more than just static sculptures. He will get to live the story.

Designing the working prototype and testing it on site at Elephanta.

Collecting the reviews of users.

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