

## Ancient Temple Vimana Images Dataset



The KU-UBDTCE-JNNCE Temple Vimana Dataset for Ancient Temple Architecture research is constructed by collecting the temple images with three basic types of architecture such as 1) Nagara , 2) Dravida, and 3) Vesara. The dataset is collected from various places such as: 1. Amrutheshwara Temple at Amruthapura Village, 2. Yoga Narasimha Temple at Baggavalli Village , 3. Aghoreshwara Temple at Ikkeri Village, 4. Parvathi Brahmeshwara Temple at Kudli Village, 5. Sri Malikarjuna Temple at HireNalluru Village, 6. Hucharaya Swamy temple at Shikaripura Village in and around the shivamogga and chikamagaluru districts of Karnataka state, India. Along with these some images also collected from web with the help of google search and trip advisor travel portal.

KU-UBDTCE-JNNCE comprises three sub-datasets namely 1) Nagara , 2) Dravida, and 3) Vesara. These three sub-dataset in-turn it contains two sub-datasets Input\_Images and Ground\_Truth\_Images. The brief description of the KU-UBDTCE-JNNCE Ancient Temple vimana Dataset is given in Table 1.

**Table 1: KU-UBDTCE-JNNCE Ancient Temple Vimana Dataset**

Sl.No.	Type of Vimana Architecture	Total Number of Samples	Description
1.	Nagara	253	Camera Device used for capturing images is Samsung having the SM-G615F with F-stop: f/1.7. All Images are captured in 3 different time slots 10.00 AM to 10.45 AM, 2.00 PM to 2.40 PM & 5.15 PM to 5.40 PM. In-order to get better images for processing
2.	Dravida	313	
3.	Vesara	300	
	<b>Total</b>	<b>866</b>	

**Purpose:** The KU-UBDTCE-JNNCE Ancient Temple Vimana Dataset is meant to be used for research purposes and shall not be used nor included in commercial applications in any form (e.g., original files, encrypted files, files containing extracted features, etc).

### Description of the KU-UBDTCE-JNNCE Ancient Temple Vimana Images Dataset

#### **I. Collection Process**

Dataset consisting of 866 images of Ancient Temple vimana which includes 1) 253- Nagara , 2) 231- Dravida, and 3) 373-Vesara. Working with custom data comes with the responsibility of collecting the right dataset. Good dataset is crucial in achieving highest possible accuracy. The standard rules for those who are building own datasets are as follows

## Rule 1 : Plan and simplify

In the beginning we must think about how does the computer sees the images it is important to understand environment, type of camera or lighting conditions. Want to use the API in a mobile camera? Aim to collect images captured by mobile phone so they match with future images.







## Rule 2 : Collection

For all the tasks we tried to get the most variable and diverse dataset of pillar images. `Following are some tips for collection of most variable and diverse dataset:

- Get images from different angles.
- Change lightning conditions.
- Take images with good quality and in focus.
- Change object size and distance.

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**Table 2: Architecture Styles of Temple Vimana Images**

Architecture Style	Nagara	Dravida	Vesara
Time slot	10.00 AM to 10.45 AM	2.00 PM to 2.40 PM	5.15 PM to 5.40 PM
Vimana Captured/Acquired Image	 1.....253	 1.....313	 1.....300
Vimana Ground Truth Image	 1.....253	 1.....313	 1.....300

## II. Labeling:

In this subsection the approach its been adopted to do labeling is detailed, based on “Sikhara” and “Garbhagriha or Garbhagudi” (cella or inner chamber). Initially a main directory created by the name STYLES under which three sub directories are created having the names as DRAVIDA, NAGARA and VESARA and in those each sub directories all our captured/acquired dataset images are stored with image name/labels as 1,2,3,...N separately.

In the same manner the created ground truth images dataset is prepared by creating a main directory having the name as GROUND TRUTH with three sub directories like DRAVIDA, NAGARA and VESARA and in each sub directory all those crated ground truth images (created with the help of GIMP tool) are stored separately having the image name/label as 1,2,3,...N. Finally, this hole labeling process recorded in .CSV file having the fields as id and category as shown in Figure 1.

A	B	A	B	A	B
DRAVIDA/1	Dravida	NAGARA/1	Nagara	VESARA/1	Vesara
DRAVIDA/2	Dravida	NAGARA/2	Nagara	VESARA/2	Vesara
DRAVIDA/3	Dravida	NAGARA/3	Nagara	VESARA/3	Vesara
DRAVIDA/4	Dravida	NAGARA/4	Nagara	VESARA/4	Vesara
DRAVIDA/5	Dravida	NAGARA/5	Nagara	VESARA/5	Vesara
DRAVIDA/6	Dravida	NAGARA/6	Nagara	VESARA/6	Vesara
DRAVIDA/7	Dravida	NAGARA/7	Nagara	VESARA/7	Vesara
DRAVIDA/8	Dravida	NAGARA/8	Nagara	VESARA/8	Vesara

**Figure 1: Labeling of ground truth images of different vimanas in .CSV format.**

**Note:** To get the unprocessed images (original images without resize) mail to [nks.cse@gmail.com](mailto:nks.cse@gmail.com), [narendra@jnnce.ac.in](mailto:narendra@jnnce.ac.in) we will share the images through google drive.