SOLUTION ARCHITECURE

A Gesture-based Tool for Sterile Browsing
of Radiology Images

PROJECT DESCRIPTION:

Humans are able to recognize body and sign language easily.This is possible due to the combination of vision and synaptic interactions that were formed along brain development. In order to replicate this skill in computers, some problems need to be solved: how to separate objects of interest in images and which image capture technology and classification technique are more appropriate, among others.
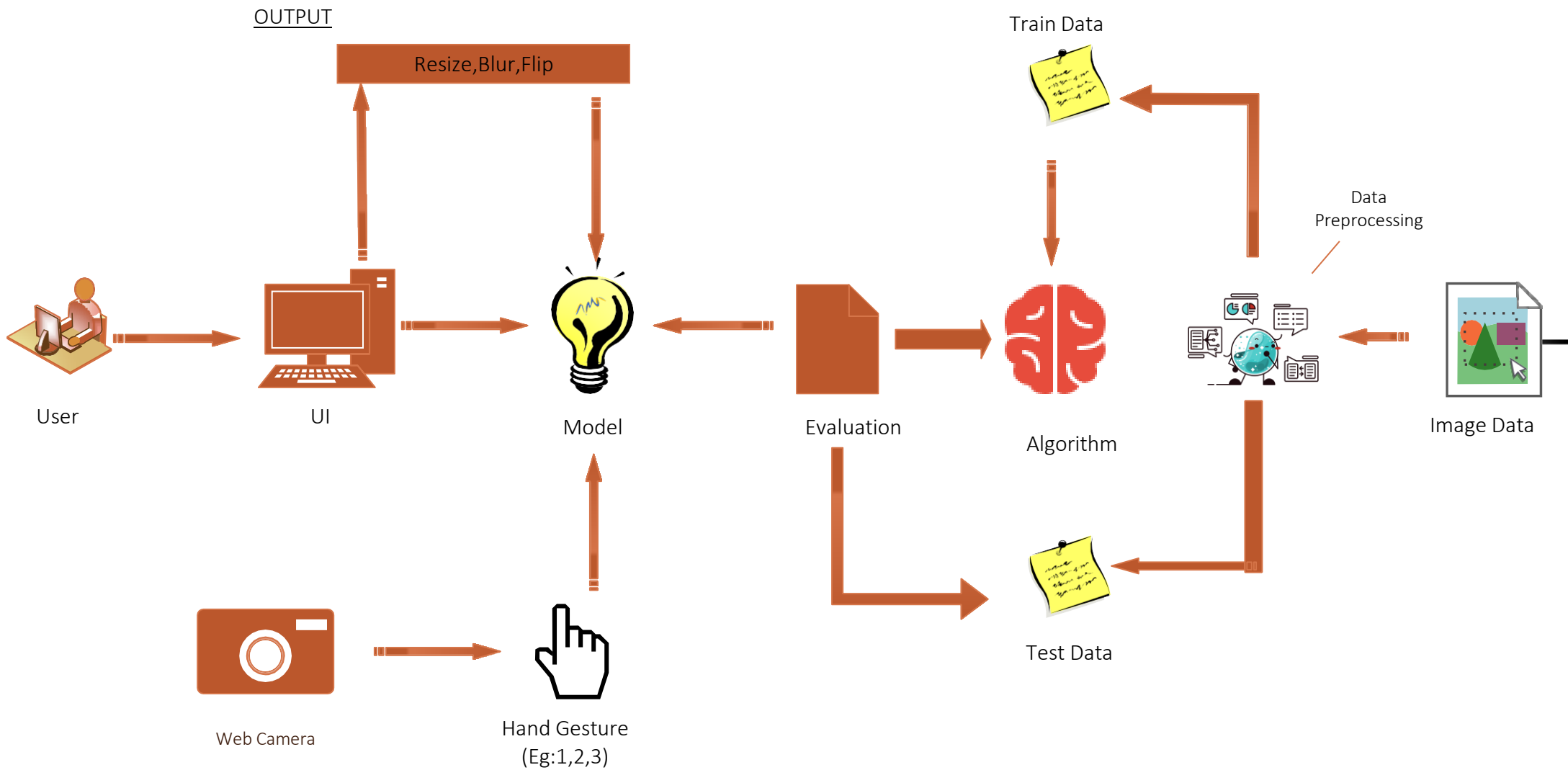
A Gesture based Recognition System used for detecting any kind of Gestures which when the given input Gesture matches with the trained image.

SOLUTION:

User interacts with the UI (User Interface) to upload the image as input. Depending on the different gesture inputs different operations are applied to the input image. Once model analyses the gesture, the prediction with operation applied on image is showcased on the UI.

PROCEDURE:

- Data Collection.
    - Collect the dataset or create the dataset
- Data Pre-processing.
- Import the Image Data Generator library
- Configure Image Data Generator class
- Apply Image Data Generator functionality to Trainset and Test set
- Model Building
    - Import the model building Libraries
    - Initializing the model
    - Adding Input Layer
    - Adding Hidden Layer
    - Adding Output Layer
    - Configure the Learning Process
    - Training and testing the model
    - Save the Model
- Application Building
    - Create an HTML file
    - Build Python Code

OUTPUT

Resize,Blur,Flip

Train Data

Data
Preprocessing

User

UI

Model

Evaluation

Algorithm

Image Data

Web Camera

Hand Gesture
(Eg:1,2,3)

Test Data

INPUT

SOLUTION
ARCHITECTURE