



الجمعية الفلكية السورية

Syrian Astronomical Association

# Astronomical Classification Using Morpheus Model

## User Guide

Voluntarily Built by

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# Introduction

**Morpheus** is a deep learning framework that helps classify images, like H, J, V, and Z astronomical images. These images capture different light wavelengths to reveal unique information about celestial objects.

The model in Morpheus learns patterns from these images to make predictions. It uses neural networks – mathematical models inspired by the human brain – to analyze features like shapes, colors, and textures.

By training on labeled data with known classifications (e.g., stars or galaxies), the model becomes capable of recognizing similar patterns in new unseen images.

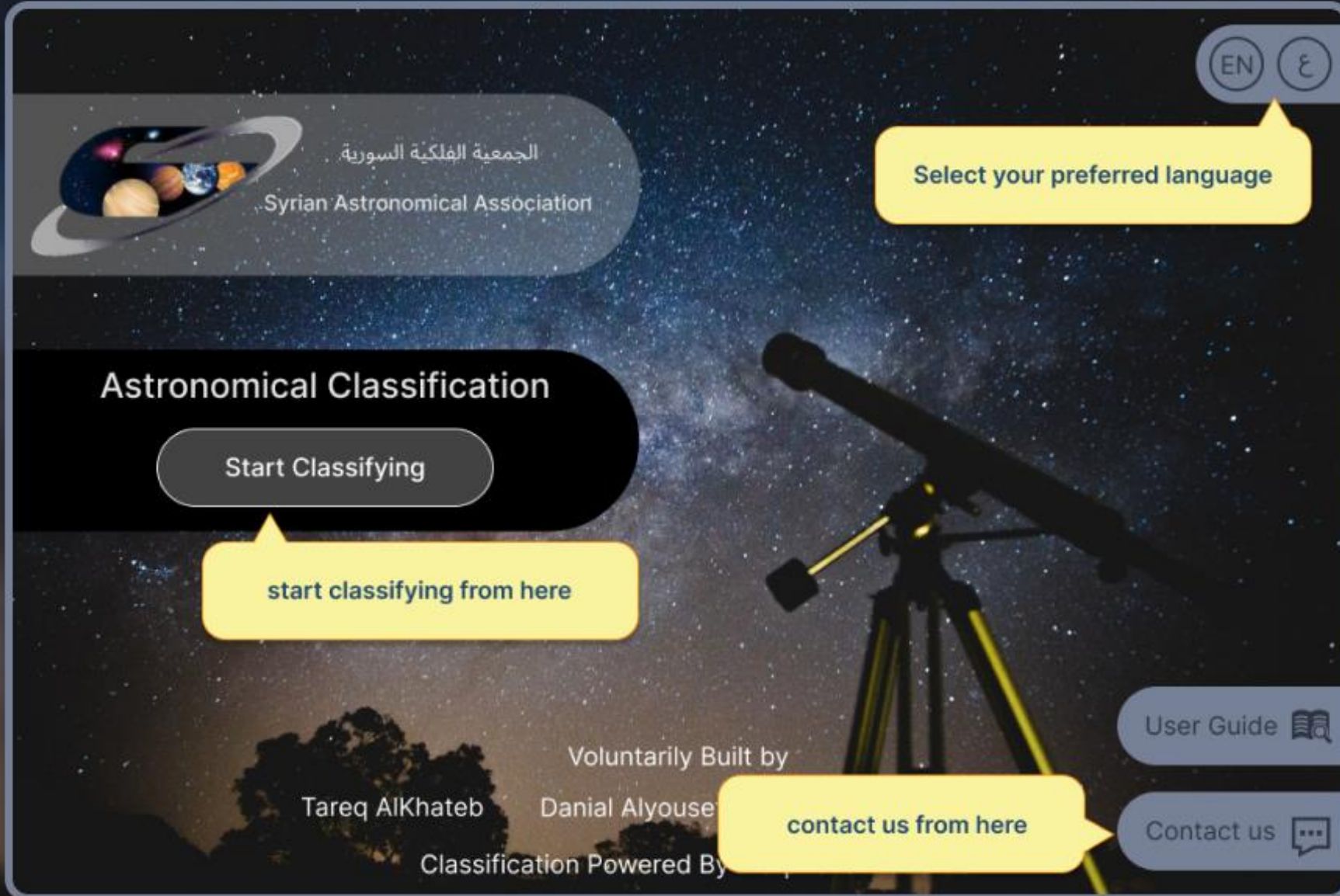
Ultimately, Morpheus enables us to build models that automatically identify astronomical objects based on their distinct characteristics captured across different wavelength bands.

On one hand this app is powered by the Syrian Astronomical Association in order to enlighten the youth about astronomy and its use with AI algorithms.

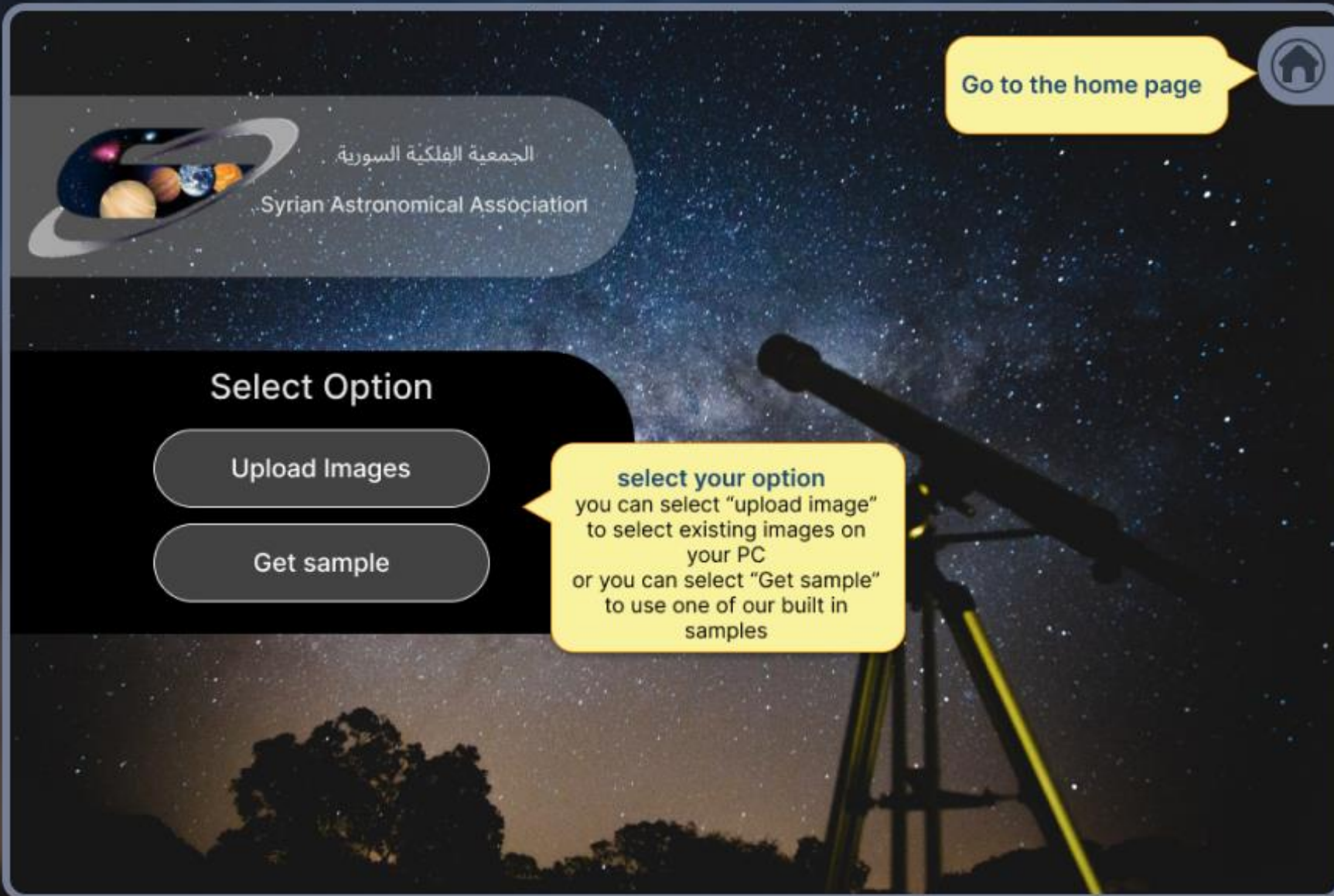
On the other hand Morpheus will provide astronomical data and its classification as the first data catalog in the Arab region to enhance the use of AI Algorithms with astronomy and astrophysics in our region.



# Home Page



# Starting Page



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Go to the home page



## Select Option

Upload Images

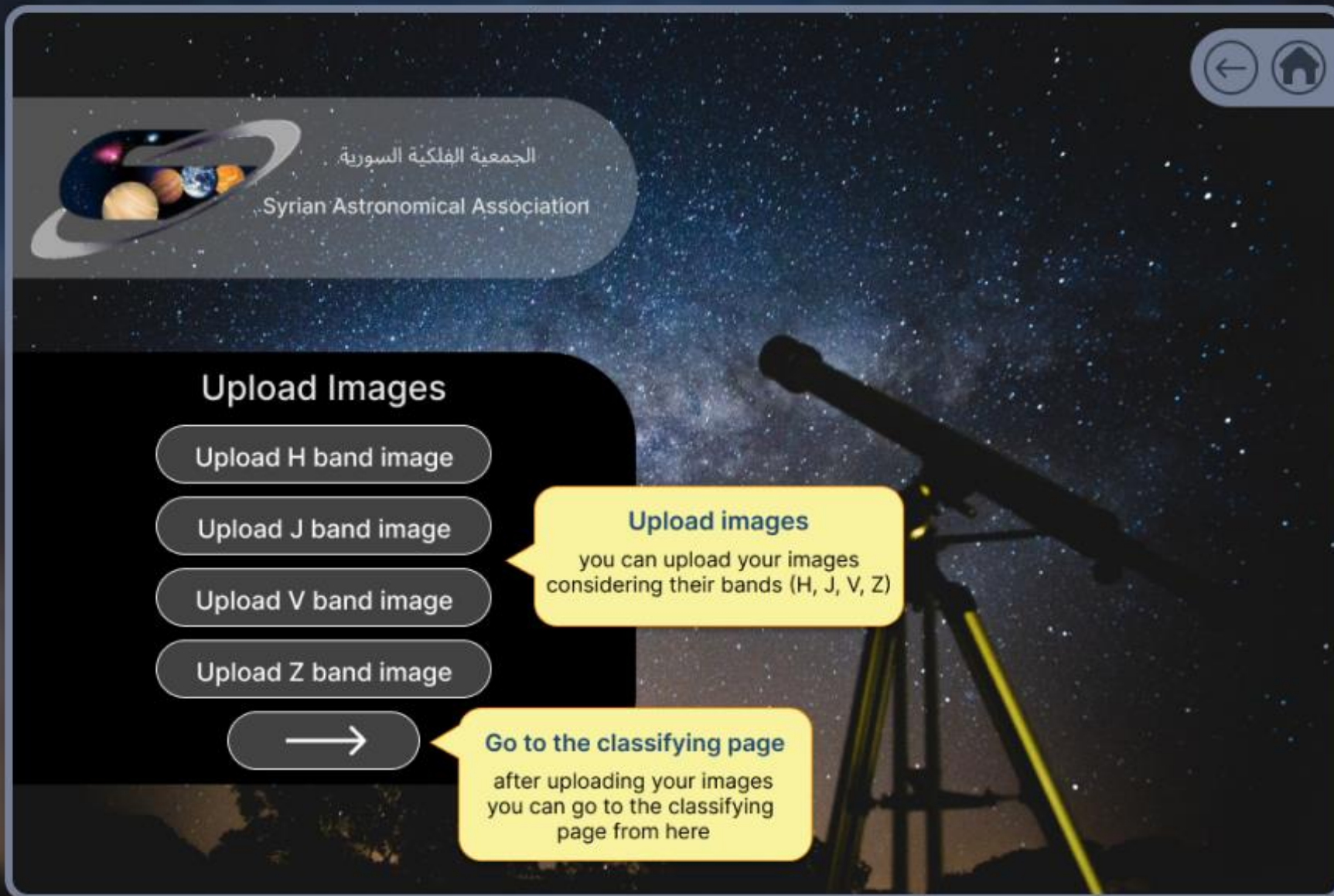
Get sample

### select your option

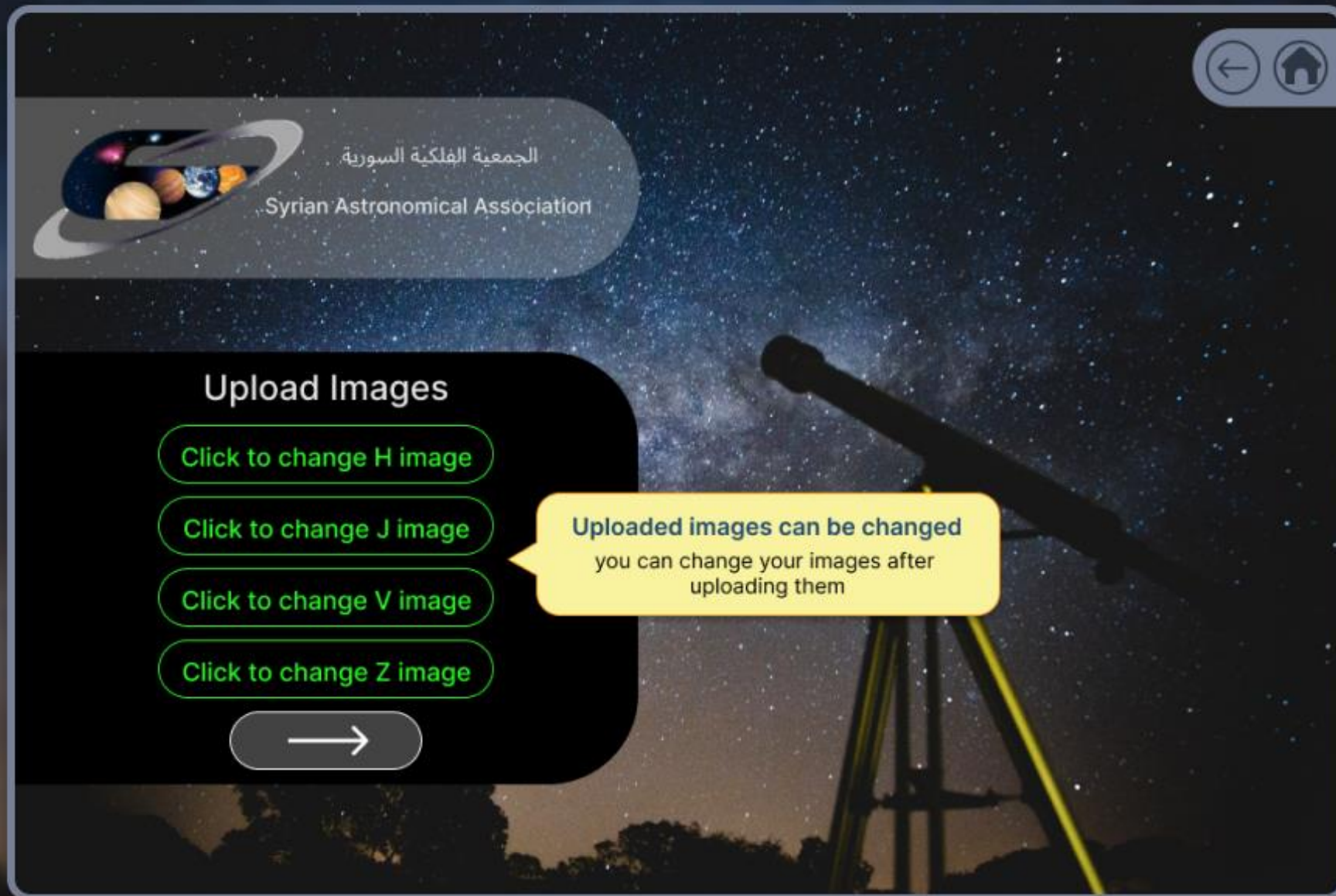
you can select "upload image"  
to select existing images on  
your PC  
or you can select "Get sample"  
to use one of our built in  
samples



# Uploading Page



# Uploading Page





# Classifying Page



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## show Input images

the input images will be shown here.  
after clicking the start button, the  
model will start classifying  
it may take between 2 to 8 minutes  
according to computer resources ,  
even if the program showed that it does  
not respond,do not close it, that's due  
to the heavy computing in the model

H band



V band

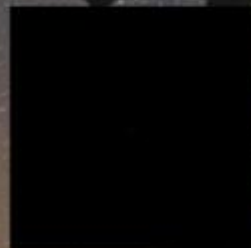


J band



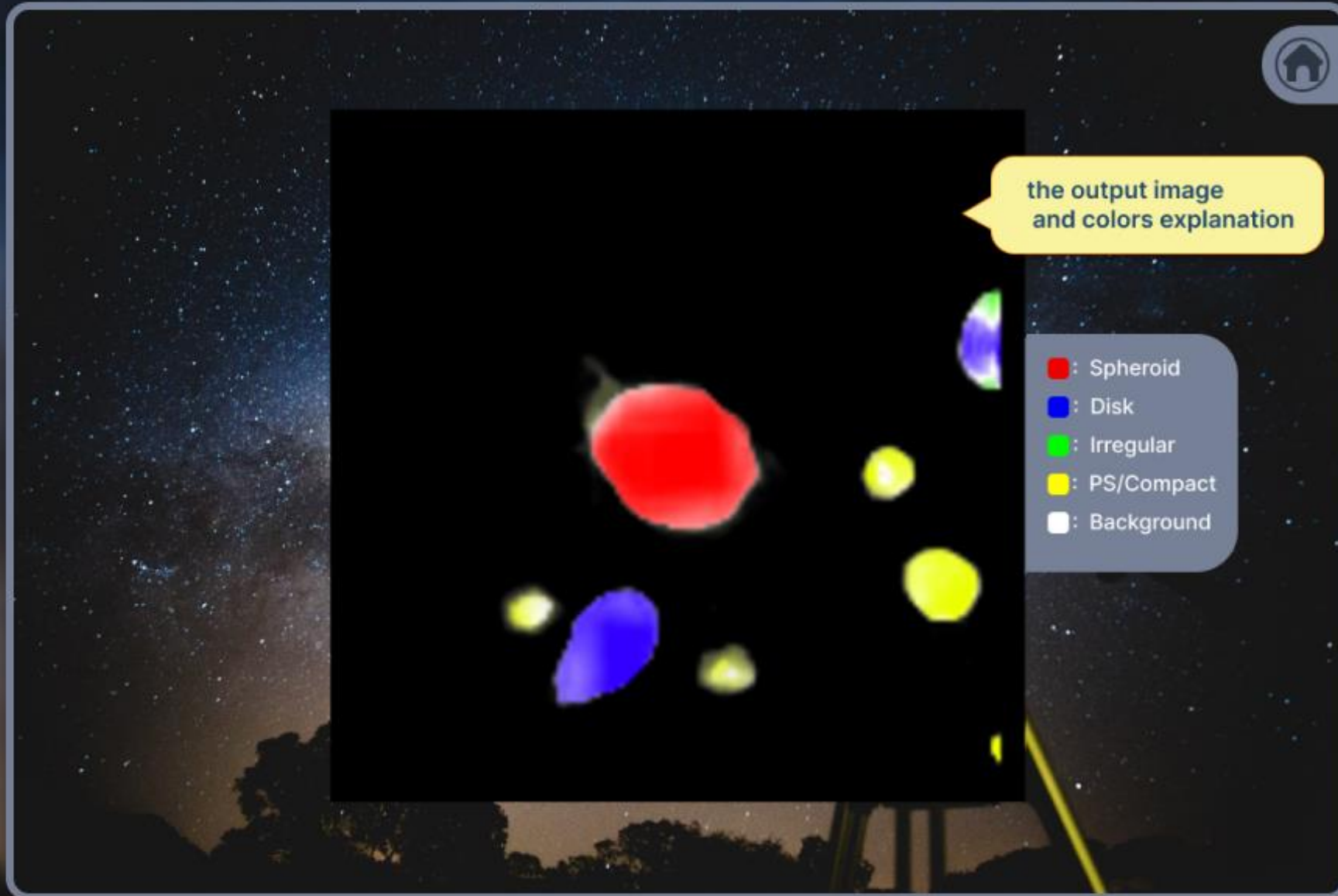
Start

Z band



this may take between 2 to 8 minutes

# Results Page





# Contact us

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