System evaluation

Image recognition and Identification

Testing Set

Training Set

Collection of Samples from Panguil Bay

Extracted feature values

Image Segmentation and Feature extraction

-Edge Detection

-Remove unwanted particles

-Rotated ROI to standard orientation

Microscopic images processed to reduce noise using OpenCV Denoising function

Neural Network Training

Feature Selection

Extracted feature values

Image Segmentation and Feature extraction

-Edge Detection

-Remove unwanted particles

-Rotated ROI to standard orientation

Microscopic images processed to reduce noise using OpenCV Denoising function

Image Acquisition using Microscope, DSLR camera, Imaging Software