System evaluation

Image recognition and Identification

Image Segmentation and Feature extraction

-Edge Detection and Smoothing of Hex-image

-Implementation of Canny Edge detector using HIP

-Remove unwanted particles

-Rotated ROI to standard orientation

Extracted feature values

Feature Selection

Extracted feature values

Neural Network Training

Hexagonal Pre-processing:

-Image Resampling using HIP framework

-Interpolation using Gabor Filter

-Image de-noising using MATLAB wdencmp function

-Addressing and Storage

-Display of Hexagonal-images

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Testing Set

Training Set

Image Acquisition using Microscope and DSLR camera

Collection of Samples from Panguil Bay