

Pic Match

Description:

Our project aims to facilitate archaeological image analysis by providing a user-friendly web application with two main functionalities, image labelling and image classification.

Our tool empowers users to efficiently identify objects within images and classify them into relevant categories.

Image Labelling Tool:

The image labelling component allows users to annotate images by marking bounding boxes around objects of interest.

Users can label images belonging to two distinct classes: images containing the target object and images lacking the object. This interactive labelling process enables users to train the classifier effectively by providing a diverse set of annotated data.

Image Classifier:

The image classification feature utilises the Scale-Invariant Feature Transform (SIFT) algorithm to match test images against the labelled classes.

Upon receiving a test image, the classifier compares its key-points with those extracted from the labelled images (within labelled bounding boxes). The class with the highest number of matches determines the predicted class of the test image. This classification functionality can be applied to individual images or entire folders, generating a comprehensive table of images alongside their predicted classes.

Usefulness for historical research Tasks:

Our project was done with the kind collaboration of Prof. Ilan Shimshoni, Dr Emma Maayan-Pener, head of the art history department, and Dror Maayan, an expert of ancient photography.

The offered application holds significant promise for historical research, particularly in tasks related to dating images using objects. The developed app will help by enhancing archaeological image analysis and aiding in dating images based on object presence.

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