

ABSTRACT

An object of the invention is to configure an object search device capable of expressing information on shapes and irregularities as features only by images, in a search for an object that is characteristic in shape or irregularity, and performing an accurate search.

The object search device includes: an image feature extraction unit that is configured with a first neural network, and is configured to input an image to extract an image feature; a three-dimensional data feature extraction unit that is configured with a second neural network, and is configured to input three-dimensional data to extract a three-dimensional data feature; a learning unit that is configured to extract an image feature and a three-dimensional data feature from an image and three-dimensional data of an object obtained from a same individual, respectively, and update an image feature extraction parameter so as to reduce a difference between the image feature and the three-dimensional data feature; and a search unit that is configured to extract image features of a query image and a gallery image of the object by the image feature extraction unit using the updated image feature extraction parameter, and calculate a similarity between the image features of both images to search for the object.