isrjournals

International Journal of Advanced Research in Computer Science Engineering and Information Technology

Volume: 4, Issue: 3,Special Issue: 2 ,Apr,2016 ,ISSN_NO: 2321-3337

HIDDEN OBJECT RECOGNITION USING BLUR DETECTION

ALAD MANOJ PETER.A[1] ,MANJUPRIYA.B[2,]MUTHUSUBBULAKSHMI.V[3.]

Asst. Professor, Dept. of Computer Science and Engineering, Agni College of Technology, India. [1]

Student, Dept. of Computer Science and Engineering, Agni College of Technology, India.[2,3]

Abstract-*We propose a different approach to identify the objects hidden in the blurred image by used to find the hidden edges.In blur enhancement by finding the intensity gradient of an image ,the blurred objects are highlighted.Our approach offers distinct advantages.The Smoothing concept has been applied in this Gaussian operation, so the finding of errors is effective.Better detection of edges especially in noise state with the help of thresholding method. Experimental results have verified that our proposed algorithm can provide various numbers of embedding capacities, produce a visually plausible texture images, and identify the hidden images.*

1. INTRODUCTION

In imaging science, image processing is processing of images using mathematical operations by using any form of signal processing for which the input is an image, a series of images, or a video, such as a photograph or video frame; the output of image processing may be either an image or a set of characteristics or parameters related to the image. Most image-processing techniques involve treating the image as a two-dimensionalsignal and applying standard signal-processing techniques to it. Images are also processed as **using various edge detection techniques.**Hidden objects in the image is identified using Edge Detection and blur enhancement.In Edge detection SOBEl Edge Detector Algorithm is three-dimensionalsignals where the third-dimension being time or the z-axis.

Image processing usually refers to digital image processing, but optical and analog image processing also are possible. This article is about general techniques that apply to all of them. The acquisition of images (producing the input image in the first place) is referred to as imaging.

In modern sciences and technologies, images also gain much broader scopes due to the ever growing importance of scientific visualization (of often large-scale complex scientific/experimental data). Examples include microarray data in genetic research, or real-time multi-asset portfolio trading in finance.

2. BACKGROUND AND RELATED WORK

In this section, we provide background and related work on image processing, upon which our presented algorithms are applied.

Commonly, filtering technique and the video registration technique are two main significance factors of a video SR (Super Resolution) enhancement algorithm. First, the classical filtering technique is based on a linear filter such as mean or median filter that are only suitable for noiseless or low power noise. Later, classical video registration techniques are usually based on a simple translation model because of the fast computation and easy implementation thereby this registration has high precision error. To get over both problems, this paper proposed the alternative SR spatial enhancement using adaptive meridian filter and GOM (General Observation Model) registration for severe noisy blurred videos.

Juan G. Gonzalez and Gonzalo R. Arce [1],[2]combined the work of doing "Statistically-Efficient Filtering in Impulsive Environments: Weighted Myriad Filters",Motion blur is the result when the camera shutter remains open for an extended period of time and a relative motion between camera and object occurs. Most research on this type of image degradation is focused on motion blur removal. In this work, we propose a novel approach for vehicle speed detection based on motion blurred images. The motion blur parameters are first estimated from the acquired images and then used to detect the speed of the moving object in the scene. We have established a link between the motion blur information of a 2D image and the speed information of a moving object. Experimental results are presented for both indoor environments and outdoor vehicle speed detection.

Volume: 4, Issue: 3,Special Issue: 2 ,Apr,2016 ,ISSN_NO: 2321-3337

Y. Yitzhaky and N. S. Kopeika[3],[4] present an approach in that various image restoration methods have been studied for removing space-variant motion blur such as iterative and POCS (projection on to convex sets) method. However, the computational complexity of the methods, such as regularized iteration and POCS method, is so high that they can hardly be implemented in real-time. We address a method to reduce the computational complexity by selecting the region to be restored. The primary application area of the proposed method is a surveillance system which requires accurate object extraction, identification and tracking functions. To remove motion blur, we propose a new spatially adaptive regularized iterative image restoration algorithm. Experimental results show the the proposed algorithm can efficiently remove space-variant motion blur with significantly reduced computational overhead.

3 SYSTEM OVERVIEW

3.1 Proposed method

The proposed system is developed to find the edges for movable obects. It can takes less time to find the edges. And it can be reduce the time and space.The main goal of the proposed system is to find the Edges instead of finding all the possible paths to reach the destination efficiently.

The ability to navigate terrain with a map and compass is a skill-set that's become lost in recent years due to technological advances like GPS and its integration into our smartphones. For many of us, navigating a city without a GPS would simply seem

ridiculous. In a sense, we've become so used to the integration of our "devices" into everyday life that we've lost the ability to perform a simple task, like leaving point A and arriving at point B without external help.In this section , we deal with modules we use in our system

3.2 Module Description:

A.Image Preprocessing

Image preprocessing can significantly increase the reliability of an optimal inspection.Several filter operations which intensify or reduce certain image details enable and easier or faster evaluation.user are able to optimize a camera image with just a few clicks.

B.Image Segmentation

Volume: 4, Issue: 3,Special Issue: 2 ,Apr,2016 ,ISSN_NO: 2321-3337

In computer vision, image segmentation is the process of partitioning a digital image into multiple
segments (sets of pixels, also known as superpixels). The goal of segmentation isto simplify and/or change the representation of an image into something that is more meaningful and easier to analyze.[1][2] Image segmentation is typically used to locate objects and boundaries (lines, curves, etc.) in images. More precisely, image segmentation is the process of assigning a label to every pixel in an image such that pixels with the same label share certain characteristics.

4 ALGORITHMS

4.1 Sobel Algorithm:

Smoothing: Blurring of the image to remove noise. 2. Finding gradients: The edges should be marked where the gradients of the image has large magnitudes. 3. Non-maximum suppression: Only local maxima should be marked as edges. 4. Double thresholding: Potential edges are determined by thresholding. 5. Edge tracking by hysteresis: Final edges are determined by suppressing all edges that are not connected to a very certain (strong) edge.

4.2 K-Means Algorithm:

1.Pick *K* cluster centers, either randomly or based on some heuristic. 2.Assign each pixel in the image to the cluster that minimizes the distance between the pixel and the cluster center.3.Re-compute the cluster centers by averaging all of the pixels in the cluster.4.Repeat steps 2 and 3 until convergence is attained (i.e. no pixels change clusters)

4.3 System study

4.3.1 Existing System

Smooth image with a Gaussian optimizes the trade-off between noise filtering and edge localizationCompute the Gradient magnitude using approximations of partial derivatives2x2 filters.Thin edges by applying non-maxima suppression to the gradient magnitude.Detect edges by double thresholding.The purpose of edge detection in general is to significantly reduce the amount of data in an image, while preserving the structural properties to be used for further image processing. Several algorithms exists, and this worksheet focuses on a particular one

developed by John F. Canny (JFC) in 1986 [2]. Even though it is quite old, it has become one of the standard edge detection methods and it is still used in research.

4.3.2 Proposed System

The proposed system is developed to find the edges for movable obects. It can takes less time to find the edges. And it can be reduce the time and space.The main goal of the proposed system is to find the Edges instead of finding all the possible paths to reach the destination efficiently.The ability to navigate terrain with a map and compass is a skill-set that's become lost in recent years due to technological advances like GPS and its integration into our smartphones. For many of us, navigating a city without a GPS would simply seem ridiculous. In a sense, we've become so used to the integration of our "devices" into everyday life that we've lost the ability to perform a simple task, like leaving point A and arriving at point B without external help.

5 SYSTEM ANALYSIS

This deals with the limitation of existing system and features of proposed system

5.1 Limitations of existing system

It is sensitivity to the noise, in the detection of the edges.The increase in the noise to the image will eventually degrade the magnitude of the edge. A large capacity allows the use of the smaller cover-image for the message of fixed size, and thus decreases the bandwidth required to transmit the stego-image.Low robustness to malicious attacks.Vulnerable to accidental. Low temper resistance.

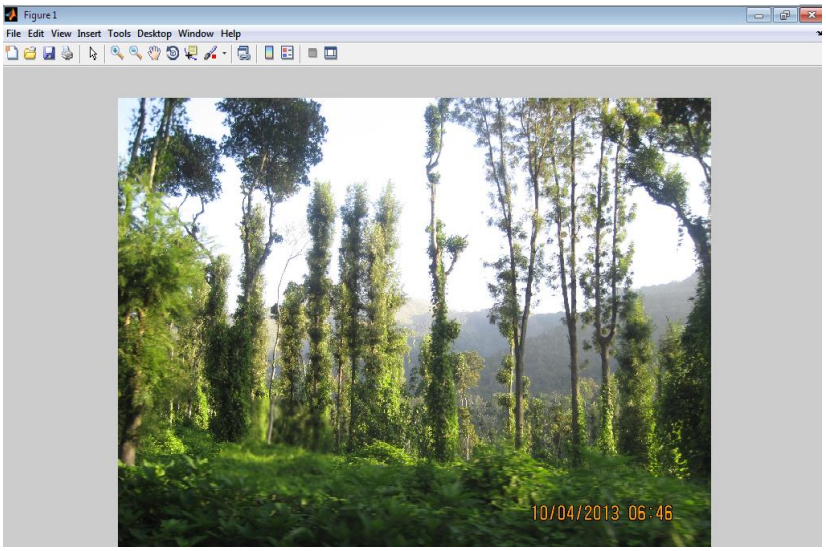
5.2 Features

The time to take traverse the all path is less.The hidden part can be identified quickly. Eliminate Security Issues.User Friendly.

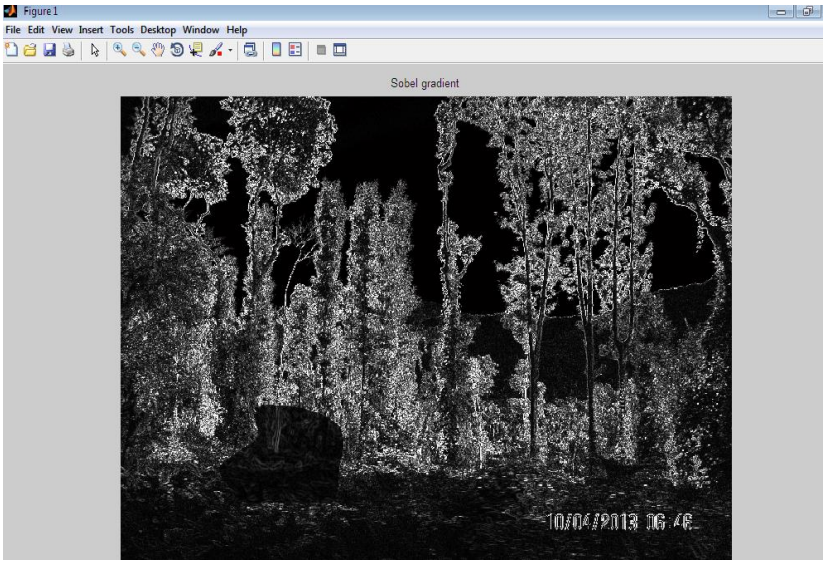
Volume: 4, Issue: 3,Special Issue: 2 ,Apr,2016 ,ISSN_NO: 2321-3337

6 OUTPUT ANALYSIS

INPUT:



OUTPUT:



7 CONCLUSIONS

By this application, in the time of war our army soldiers can easily able to find the Hidden part to reach the enemies to do the attack. It can identify the edges using Sobel Edge Detection Algorithm and reduces the time and space complexity.

8 FUTURE WORKS

The future goal the project is instead of give the input by us the application can directly get the image from the satellite and show the edges for the destination. This application is not only for army, it is also for navy and air force.

REFERENCES

[1] D. Rajan, "Multi-Objective Super Resolution Concepts and Examples", IEEE SP. Mag., 2003 Abstract | Full Text: PDF (971KB) | Full Text: HTML

[2] Juan G. Gonzalez and Gonzalo R. Arce, "Statistically-Efficient Filtering in Impulsive Environments: Weighted Myriad Filters", EURASIP JASP

[3] M. Irani and S. Peleg, "Improving Resolution by Image Registration," CVGIP: Graphical Models and Image Proc, vol. 53, no. 3, pp. 231-239, May 1991.

[4] M. E. Angelopoulou, C.-S. Bouganis, P. Y. K. Cheung, and G. A. Constantinides, "Robust Real-Time Super-Resolution on FPGA and an Application to Video Enhancement," ACM Transactions on Reconfigurable Technology and Systems, to appear, 2009.

[5] Y. Yitzhaky and N. S. Kopeika, "Identification of Blur Parameters from Motion Blurred Images," Graphical Models and Image Processing, vol. 59, no. 5, pp. 310320,Sept.1997.

Volume: 4, Issue: 3,Special Issue: 2 ,Apr,2016 ,ISSN_NO: 2321-3337

[6] Yang Jian, Zhang Davis, F. Frangi Alejandro and Jing Ju Yang, "Two-Dimensional PCA: A New Approach to Appearance-Based Face Representation and Recognition", IEEE Transactions on Pattern Analysis and Machine Intelligence, vol. 26, pp. 131-137, 2004

[7] Timo Ahonen, Abdenour Hadid and Matti Pietikainen, "Face Description with Local Binary Patterns: Application to Face Recognition", IEEE Transactions on Pattern Analysis and Machine Intelligence, vol. 28, pp. 1-15, 2006