YOUR TITLE

by

YOUR NAME

A [thesis | dissertation] submitted in partial fulfillment of the requirements for the degree of [Master of XXXX | Doctor of Philosophy] in
Computer Science

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Acknowledgments

Write your touching message here..

Abstract

Abstract here..

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Chapter 1

Introduction

Some text.

1.1 Overview

Human monitoring is therefore becoming increasingly expensive and ineffective as the torrent of video data increases. For instance, in a CCTV monitoring room (see Figure 1.1), security operators are required to monitor 24 hours a day and be ready to take action when an alarm occurs.

1.2 Problem Statement

Some text ...

1.3 Objectives

Some text ...

1.4 Limitations and Scope

Some text ...

1.5 Thesis Outline

I organize the rest of this dissertation as follows.

In Chapter 2, I describe the literature review.

In Chapter 3, I propose my methodology.

In Chapter 4, I present the experimental results.

Figure 1.1: CCTV monitoring room. Reprinted from the Twenty First Security Web site (`http://www.twentyfirstsecurity.com.au/`).

Finally, in Chapter 5, I conclude my thesis.

Chapter 2

Literature Review

Some intro..

2.1 Section Name in Literature Review

Example text below ..

Yamato et al. (1992) apply the background subtraction technique to extract blobs or human from a scene by the following conditions:

$$\begin{array}{ll} \text{if} & |I_a(x,y) - I_b(x,y)| < T,\ I_e(x,y) = 0 \\ \text{else} & I_e(x,y) = I_a(x,y), \end{array}$$

where $I_e(x,y)$ is a human extracted image, $I_a(x,y)$ is an original image, $I_b(x,y)$ is a background image, and T is a threshold. Figure 2.1 shows something. Some work also uses mesh features (Yamato et al., 1992).

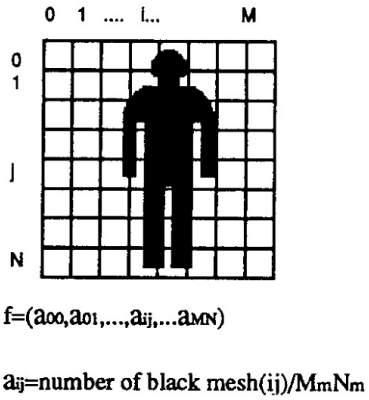

Figure 2.1: Mesh feature calculation. Reprinted from the work of Yamato et al. (1992).

Chapter 3

Methodology

Some intro..

3.1 System Overview

Some text .. Algorithm 1 just a pseudocode.

3.2 System Design

3.2.1 Design A

Some text ..

Algorithm 1 Lame Algorithm

Input: B: set of all current blobs

Input: T: set of all current tracks

Input: M: merged track association matrix

Output: $\widetilde{T}$: set of all revised tracks

Output: $\widetilde{M}$: revised merged track association matrix

$\widetilde{T} \leftarrow \emptyset$; $\widetilde{M} \leftarrow \emptyset$; $L \leftarrow \emptyset$

$A \leftarrow$ GET-OVERLAP-AREA-MATRIX(B, T)

for each $t \in T$ **do**

if t is marked as processed **then** continue

$B' \leftarrow \{b' \mid A(b', t) > 0\}$ {B' contains candidate blobs for track t.}

$T' \leftarrow \{t\} \cup \{t' \mid M(t, t') = 1\}$ {T' contains all tracks currently merged with t.}

if $|B'| \geq 1$ **then**

for each $t' \in T'$ **do**

Let $b = \underset{b' \in B'}{\operatorname{argmax}} S(b', t')$

$L \leftarrow L \cup \{(t', b)\}$

MARK-TRACK-AS-PROCESSED(t')

end for

end if

end for

for each $(t_i, t_j) \in T \times T$ **do**

If $\exists b$ s.t. $(t_i, b) \in L \wedge (t_j, b) \in L$, $\widetilde{M}_{ij} \leftarrow 1$, otherwise $\widetilde{M}_{ij} \leftarrow 0$

end for

$T^* \leftarrow \{t^* \mid \neg\exists b \in B$ s.t. $(t^*, b) \in L\}$ {T^* contains tracks for which "stale count" will be increased.}

$\widetilde{T} \leftarrow$ UPDATE-OR-DELETE-STALE-TRACKS(T, T^*)

$B^* \leftarrow \{b^* \mid \neg\exists t \in T$ s.t. $(t, b^*) \in L\}$ {B^* contains blobs with no tracks assigned.}

$\widetilde{T} \leftarrow$ ADD-NEW-TRACKS-FOR-NOT-LINKED-BLOBS$(\widetilde{T}, B^*)$

Chapter 4

Experimental Results

Some intro..

4.1 Section Name in Experimental Results

Table 4.1 shows a table.

Table 4.1: Some table.

Batch method	TP	FP	TN	FN	TPR	FPR
Local (z-scoring)	24	42	444	0	1	0.086
Local (LRT)	24	486	0	0	1	1
Global (z-scoring)	24	217	10	0	1	0.956
Global (LRT)	24	223	4	0	1	0.982

Chapter 5

Conclusion and Recommendations

Some text..

5.1 Conclusion

Text..

5.2 Recommendations

Text..

References

Yamato, J., Ohya, J., & Ishii, K. (1992). Recognizing human action in time-sequential images using hidden Markov model. In *International Conference on Computer Vision and Pattern Recognition (CVPR)* (pp. 379–385).

Appendix A

.. TITLE HERE ..

Section Name

Figure A.1 shows something.

Some text ..

Figure A.1: CCTV monitoring room. Reprinted from the Twenty First Security Web site (`http://www.twentyfirstsecurity.com.au/`).