HUMAN BEHAVIOUR RECOGNITION, IDENTIFICATION, AND COMPUTER INTERACTION

Edited by

Othman Omran Khalifa, B.Sc. ,M.Sc., Ph.D.,
International Islamic University Malaysia

Shihab A. Hameed, B.Sc., M.Sc., Ph.D.,
International Islamic University Malaysia

Sheroz Khan, B.Sc., M.Sc., Ph.D.,
International Islamic University Malaysia

IIUM PRESS

INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

HUMAN BEHAVIOUR RECOGNITION, IDENTIFICATION AND COMPUTER INTERACTION

Edited by

Othman Omran Khalifa, B.Sc. ,M.Sc., Ph.D.,
International Islamic University Malaysia

Shihab A. Hameed, B.Sc., M.Sc., Ph.D.,
International Islamic University Malaysia

Sheroz Khan, B.Sc., M.Sc., Ph.D.,
International Islamic University Malaysia

IIUM Press

Published by:
IIUM Press
International Islamic University Malaysia

First Edition, 2011

Cataloguing-in-Publication Data Perpustakaan Negara Malaysia

ISBN: 978-967-418-156-7

Member of Majlis Penerbitan Ilmiah Malaysia – MAPIM
(Malaysian Scholarly Publishing Council)

Printed by :
IIUM PRINTING SDN. BHD.
No. 1, Jalan Industri Batu Caves 1/3
Taman Perindustrian Batu Caves
Batu Caves Centre Point
68100 Batu Caves
Selangor Darul Ehsan

CONTENTS

Part- III Human Identification and Computer Interaction

Chapter 2

Human Posture Recognition: Literature review

Othman O. Khalifa[1], Kyaw Kyaw Htike[1], Lai Weng Kin[2] and A. A. Alkhazmi[3]

[1]Department of Electrical and Computer Engineering

International Islamic University Malaysia

[3]Faculty of Electronic, Beniwalid, Libya

ali.kyaw@gmail.com, khalifa@iium.edu.my

2.1. Introduction

Human Posture giving machines the ability to detect, track and identify people and their actions from video, has become a central topic in computer vision research. Recognition of human posture is a very challenging problem. The importance of human posture recognition or classification is evident by the increasing requirement of machines that are able to interact intelligently and effortlessly with a human inhabited environment. Recognizing human posture in images and videos is an important task in many multimedia applications, such as multimedia information retrieval, human computer interaction, and surveillance. Posture is a snapshot of human body configuration. Many research work focus on human action recognition which corresponds to the analysis of human motion. Thereby spatial and temporal characteristics of an object need to be considered. The estimation of the human body posture and the localization of the body parts is one way to analyze the spatial part.

2.2. Previous Work

Many experimental and commercial systems exist for recognizing human body configurations in controlled environments. Examples include the Massachusetts Institute of Technology's Media Lab Kidsroom [1] and Vivid Group's gesture-recognition system [2].

Figure 2.1: A view of the KidsRoom [1] showing two projection screens