

HUMAN BEHAVIOUR
RECOGNITION,
IDENTIFICATION,
AND COMPUTER
INTERACTION

Edited by

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

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International Islamic University Malaysia

Sheroz Khan, B.Sc., M.Sc., Ph.D.,
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IIUM PRESS

INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

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IIUM Press

Published by:
IIUM Press
International Islamic University Malaysia

First Edition, 2011
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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

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Chapter 3

Theoretical Background of Human Posture Recognition

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3.1. Introduction to Human Postures

Human posture refers to the arrangement of the body and its limbs. According to Oxford Dictionary (2009), posture is defined as the particular position of the body and the way in which a person holds his or her body. There are several agreed types of human postures such as standing, sitting, squatting, lying, kneeling and other unusual positions such as standing on the arms, standing on the head, being "on all fours" and etc. Some examples of human postures are shown in Figure 3.1 [1][2].

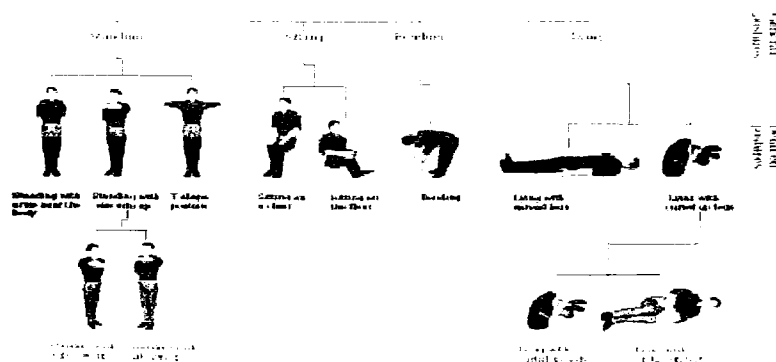


Figure 3.1 Examples of different human postures [2]

3.2. Overview of Pattern Recognition

Pattern recognition is "the act of taking in raw data and taking an action based on the category of the pattern" [3]. Most research in pattern recognition is about methods for supervised learning and unsupervised learning. Humans have developed a sophisticated skills for sensing their surround environment and responses according to what they observe, for example, recognizing a face, understanding spoken words, reading handwriting, distinguishing fresh food from its smell, etc. Pattern recognition is a field whereby similar