HUMAN BEHAVIOUR RECOGNITION, IDENTIFICATION, AND COMPUTER INTERACTION

Edited by

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CONTENTS

Part- III Human Identification and Computer Interaction

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].

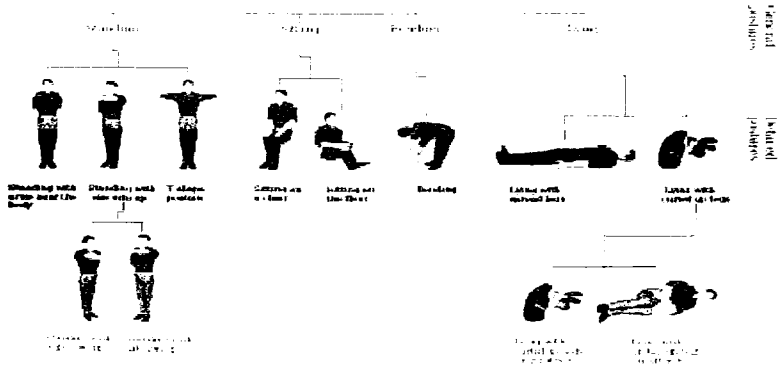

Figure 3.1 Examples of different human postures [2]

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