

HUMAN BEHAVIOUR RECOGNITION, IDENTIFICATION, AND COMPUTER INTERACTION

Edited by

Othman Omran Khalifa, B.Sc., M.Sc., Ph.D.,
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Chapter 15

Human Path Detection: A Review

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15.1 Introduction

A path analysis component is required to perform two operations as shown in Figure..1. The first process that needs to be conducted is to extract commonly used paths from a training set of lengthy video sequences; and the second is to compare new paths with this training database of extracted paths. Path extraction or path detection refers to the grouping of similar object trajectories in video sequences and generating a path. Intuitively, a path will represent an average of a set of similar trajectories. There are two problems associated with path extraction:

1. Finding the extent of similarity between trajectories in order to check if they can be grouped together into one path.
2. Averaging the similar trajectories into a path, so that the path is representative of the trajectories which it is comprised of, or which it represents.

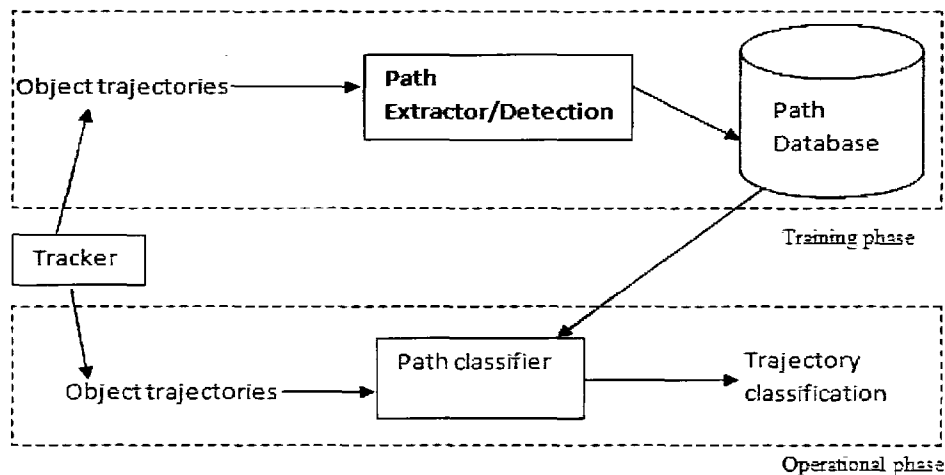


Figure 15.1: Path analysis components