

Preface

Over the course of the last 10–20 years the field of computer vision has been preoccupied with the problem of looking at people. Hundreds, if not thousands, of papers have been published on the subject that span people and face detection, pose estimation, tracking and activity recognition. This research focus has been motivated by the numerous potential application for visual analysis of people from human–computer interaction to security, assisted living and clinical analysis of movement. A number of specific and general surveys have been published on these topics, but the field is lacking one coherent text that introduces and gives a comprehensive review of progress and open-problems. To provide such an overview is the exact ambition of this book. The target audience is not only graduate students in the computer vision field, but also scholars, researchers and practitioners from other fields who have an interest in systems for visual analysis of humans and corresponding applications.

The book is a collection of chapters that are written specifically for this book by leading experts in the field. Chapters are organized into four parts.

Part I: Detection and Tracking (seven chapters),

Part II: Pose Estimation (six chapters),

Part III: Recognition of Action (seven chapters),

Part IV: Applications (ten chapters).

The first three parts focus on different methods and the last part presents a number of different applications. The first chapter in each book part is an introduction chapter setting the scene. To support the reading of the book an index and list of glossary terms can be found in the back of the book. We hope this guide to research on the visual analysis of people contributes to future progress in the field and successful commercial application as the science and technology advances.

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Visual Analysis of Humans

Looking at People

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