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State of the Art in AI Applied to Ambient Intelligence

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We are moving towards a future where environments respond to human preferences and needs. In this world, smart devices equipped with intelligent features and the capability to sense, communicate with and support humans in daily activities will be unremarkable. We already expect our cars to warn us of hazards, track our location and provide timely route advice, and in future we will speak to simple machines and hold conversations with more complex systems, such as intelligent homes, which will help us to monitor conditions, track routine tasks, and program the heating, lighting, garden watering and entertainment centre. But questions have been raised in recent years as to how intelligent these so called smart systems or ambient intelligence environments really are.

This book, State of the Art in AI Applied to Ambient Intelligence, part of the outcome of the Workshop on Artificial Intelligence Techniques for Ambient Intelligence (AITAmI) which has now run for 10 consecutive editions, aims to provide a clear picture of what has been achieved after a decade of discussion. It is representative of the diversity of approaches and issues which are currently being considered, and also indicates those avenues which are the most promising for exploration in the next decade.

The book provides all those working in the field with an up-to-date reference where they will find inspiration to create better systems for the society of tomorrow.

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