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演題

AIのスポーツへの応用 - 現在と未来 Artificial Intelligence in Sports - Current and Future Applications

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Artificial Intelligence has been called the “New Electricity”. The comparison calls attention to the fact that electricity impacted the use of labor and transformed economies from being farm-based to factory-based. Further, it implies artificial intelligence will have a similar impact on displacing labor, creating industries and transforming economies. Popular media no doubt exaggerates the speed, impact and ethical implications of artificial intelligence. Nevertheless, there is little doubt that each day more and more AI-enabled machines are being used in homes, offices, hotels, hospitals, restaurants, warehouses, banks, manufacturing plants, retail outlets and all other places where human labor is required. Sports and Sport Industries have already begun to feel the impact of artificial intelligence. In this talk, I offer as background, a brief (non-technical) description of the ideas underlying two major artificial intelligence methods: supervised and unsupervised learning. These two methods can be thought of as building blocks which are used to create the abilities seen in the majority of today’s AI applications. I’ll describe the business factors that drive the impact of AI on sports and offer a timeline for future developments. Next, with the help of a few short videos, I’ll focus on developments in the areas of coaching and training. Coaches have a wide range of responsibilities both on and off the playing field, for example: analyzing opposing teams, developing tactical strategies, building team spirit and overseeing training programs. I’ll offer an answer to the question: which, if any, of a coach’s responsibilities can be enhanced (or replaced) by artificial intelligence and when will this happen? To answer the question, I draw on developments from various academic research settings. I’ll end with a few observations about the speed of the impact of artificial intelligence on sports and the sports industry.

