

Shaping the athletic brain!

 \sim Sports performance improvement system based on brain science \sim

Abstract

Fitness, skill, and mind control abilities are fundamental to excelling in sports: besides strong physical development, succeeding in sports also requires optimal coordination of body movement and control over mental state. This research aims at developing a novel assistance method for performance improvement, focused on issues of skill and mind. Sports performance is greatly affected by automated movements and decision-making, resulting from implicit and unconscious brain function. We are exploring the integrated use of technologies such as wearable sensors, machine learning, multimodal information display, by which players' biological data is extensively stored during games, and their essential features are extracted for training and shaping brains to win. In the future, you will benefit from an intuitive and individual specialized coaching provided by the system, based on your own individual data stored and analyzed automatically during daily exercises.



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[Reference]

T. Kimura, T. Mochida, T. Ijiri, M. Kashino, "Body-mind sonification to improve player's actions in sports," *NTT Technical Review*, Vol. 14, No. 1, 2016.
 M. Kashino, T. Mochida, T. Ijiri, T. Kimura, *Japanese Journal of Biomechanics in Sports & Exercise*, Vol. 19, No. 4, pp. 230-239, 2015.

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