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Deep Reinforcement Learning use cases using football training as example.

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Google has recently developed an open-source research environment called Google Research Football for training artificial intelligence (AI) to play football better than any human could. With the potential to provide real-time recommendations for each player on the pitch, this could revolutionize the way football is played and trained. The AI predicts the best possible move for each player every second, taking into account factors such as position, score, and ball placement, and recommends actions such as long passes, tackles, shots, or dribbles. The sophisticated system could be used during training sessions as a supplementary tool to prepare for matches, allowing teams to emulate specific opponents' setups and behaviors. By loading up-to-date setups, which simulate real teams like Real Madrid, and giving recommendations to players on the pitch, teams could enhance their gameplay and increase the likelihood of winning matches. This training approach would also make games more attractive by bringing more action and goals to matches. Data collection during training sessions could be performed using drones that scan the pitch from the top, providing real-time observations of players' positions, scores, and ball placements. Overall, the potential applications of AI in football could train the brain and help players reach their maximum athletic potential. Average player spends only 2 minutes per game on the ball and the rest is movement without the ball. Pre-trained algorithms can improve both of these actions and decision making around it. It will take number of Years to introduce it as a common element in football training, but it can be speed up when the results will speak for themselves. I would love to see where this kind of training could take the top footballers and the effect of it on quality of the games.

Biography

Sebastian Slisz have graduated Computer Aided Manufacturing in 2013 and since then worked with number of high tech businesses. He had a chance to work with complex datasets of modern data collected using multiple types of sensors and technologies including computer vision, RFID, proxy, laser sensors and data collection platforms. He have worked on R&D projects including AI/ML and digital twins. He have read most of the AI related books from Packt Publishing platform and participated in number of Kaggle ML competitions.

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