Abstract

With people’s attention span dropping and computational capacity increasing, artificial intelligence and machine learning are making inroads into the area of gaming. One such technique to make games more interesting, i.e. player modeling has become popular of late. However, most of the work on player and opponent modeling involves strategy games. The aim of the paper is to model the style, and more importantly, even the skill of a player in an entirely different genre, the target based aiming games. It was found that traditional player modeling approaches fail in this genre as real valued continuous output needs to be modelled. The research took a turn to regression methods to model this genre and explore and pick from a number of algorithms. These were next applied to a practical game and evaluated against the humans, on which they were modelled, to judge their performance. The paper concludes by talking about how these methods can also be extended to other similar genres like first person shooters.

Index Terms
Keywords

Target-based aiming, player modeling, regression, adaptive game AI.