

This thesis focuses on the development of tools to improve the experience of playing the online fantasy football game Sorare. In Sorare, players buy collectible cards that represent real footballers and compete against other players, with success depending on the actual performance of the footballers in real matches. Our work aims to address two main problems that players face in the game. First, we attempt to accurately predict a soccer player's score in an upcoming match based on data available before the match. Second, we seek to identify players undervalued by the market, which represent potential investment opportunities. We describe the whole process of machine learning from data acquisition, data processing, designing appropriate algorithms, training models to evaluation. In both cases, the proposed algorithms have demonstrated usefulness compared to simple average-based predictions.