ABSTRACT

In football scouting, identifying players with similar roles or styles is a critical task for recruitment and tactical planning. This thesis explores advanced machine learning techniques to embed football players in low-dimensional spaces based on event data, preserving spatial and relational information such as origin-destination patterns in passing and carrying actions. By leveraging clustering algorithms that do not require a fixed number of clusters, the methodology enables the discovery of nuanced player roles, such as distinguishing playmakers from ball-winning midfielders, even when they occupy similar spaces on the pitch. The proposed framework aims to provide a scalable and interpretable approach for analyzing similarities between players, offering clubs a data-driven tool to identify replacements, scout talent, and optimize recruitment strategies.