Research Papers on 'Valorant'

Paper 1:

Beyond Win Rates: A Clustering-Based Approach to Character Balance   Analysis in Team-Based Games

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Summary:

- Character diversity in competitive games, while enriching gameplay, often introduces balance challenges that can negatively impact player experience and strategic depth. Traditional balance assessments rely on aggregate metrics like win rates and pick rates, which offer limited insight into the intricate dynamics of team-based games and nuanced character roles. This paper proposes a novel clustering-based methodology to analyze character balance, leveraging in-game data from Valorant to account for team composition influences and reveal latent character roles. By applying hierarchical agglomerative clustering with Jensen-Shannon Divergence to professional match data from the Valorant Champions Tour 2022, our approach identifies distinct clusters of agents exhibiting similar co-occurrence patterns within team compositions. This method not only complements existing quantitative metrics but also provides a more holistic and interpretable perspective on character synergies and potential imbalances, offering game developers a valuable tool for informed and context-aware balance adjustments.