

## **Team RAY – Strategy Description**

In each round, we bid close to our true valuation when budget pressure is high (either because we have a lot of budget left per remaining round or because we are late in the game with a large remaining budget). When bidding close to our valuation, we try to make other players to pay as much as possible, in case we don't win. When budget pressure is lower, we compare the current item's valuation to the expected value of future items and bid aggressively only if the current item is relatively good, otherwise keeping the budget for better opportunities. All bids are capped by our valuation, guaranteeing non-negative utility in every round we win.

This strategy gives us an advantage because it balances aggressiveness and safety. Unlike always-truthful bidders, we avoid overspending early on low-value items, preserving budget for high-impact rounds. Unlike overly conservative bidders, we actively increase aggressiveness when the game state indicates unused budget would be wasted. As a result, we convert budget into utility more efficiently over time while avoiding costly overbidding, which allows us to outperform agents that are either too myopic or too passive.