**Project 4 Proposal: Optimizing Blackjack Strategies**

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The goal of this project is to develop and analyze optimized strategies for playing Blackjack using machine learning algorithms. Specifically, we will use various techniques to build a model that predicts the best possible moves based on the player's current hand, the dealer's upcard, and the game state. This will allow us to evaluate and improve the performance of Blackjack strategies and generate recommendations that enhance the player's chance of winning.

The current blackjack strategy is based on basic probability and simple rules for hitting, standing, doubling down, and splitting. However, a more in-depth analysis using machine learning techniques can improve these strategies by considering more factors like dealer tendencies, specific betting patterns, or card counting insights. We aim to optimize the decision-making process for Blackjack players by using machine learning to predict the best action of either hit or stay based on the game's current state, using historical game data. The [insert dataset] will help us train models to make predictions on the optimal move for any given hand.

**Technologies used:**

* Machine learning with Keras and TensorFlow
* Python Pandas
* Python matplotlib (can change depending on what we do)