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**Concept Recommendation:**

The decision matrix should be used to recommend a concept to pursue. This concept does not necessarily need to be the top-scoring solution from the decision matrix. If the concept is not the top-scoring solution from the decision matrix then an explanation for why this solution was chosen should be given.

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A lot of ideas have been brainstormed with respect to a solution for the Microsoft HoloLens AR/VR Blackjack game. The main factor was in the decision on how the object-detection will be done. Thus, for the project concept, it is recommended that the best solution is to use YOLOv3 which is an AI that is trained to detect objects through a camera. Using YOLOv3, we can train the AI to detect cards for their symbol, and the number (A, J, Q, K, and 2-10).

YOLOv3 thus gives us the top-scoring solution to perform object-detection with machine learning opposed to trying to do object-detection using some built-in Unity code, which is uncertain that it will work. The object-detection for the playing cards requirement is crucial for the implementation of the tool-assisted blackjack game, so that it gives suggestions with the best probability of winning.

Another imperative recommendation for the concept, is to use a game engine that will be able to interface with the Microsoft HoloLens, with the options of Unity or Unreal. There does not seem to be any other ways to interface with the Microsoft HoloLens. It has been decided to use Unity because there seems to be more resources/documentation and seems to be more simple compared to using the Unreal game engine. Thus, we chose to use Unity as the host for running our app, as opposed to Python by itself.

Using a Python script, a TCP server will be implemented to the HoloLens project. The TCP will be used to send any data that is needed regarding AR, or the YOLOv3 data for the object detection functionality. Furthermore, the HoloLens will be able to connect to Wi-Fi, and then use the client can formed through a C# script on Unity, and a TCP connection can be made.

The Wi-Fi connection is needed for the TCP connection to work. This solution is chosen in case the transmission of data needs to be made through Python, which might make the programming for the project easier and more effective. This solution is a top-scoring solution with a weight of 9, opposed to a weight of 5, when using the Holographic Remoting Player to make a Wi-Fi connection.