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**Comparison of Solution Concepts to Problem Requirements:**

Each solution must be compared against the problem requirements to determine how that solution concept will meet the requirement. The specific manner in which the requirement is met by the concept must be discussed. If a concept does not meet a requirement then this should also be mentioned.

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(Specifics)

1. The connection to the wifi router will be done via python TCP connection. The game will be streamed from the host computer in Unity.
2. The app rendering will be done in Unity, which allows for all built-in helper functions for the hololens to work properly. This solution also allows easy deployment to the hololens via python.
3. The Battery runtime shall be improved since the rendering will be done on the host machine. Since the application will be created in Unity, we can compare the runtime of the application on the hololens itself vs running the application remotely.
4. Object Detection will be done via the YOLOv3 machine learning Object Detection algorithm. First, models of playing cards will be trained so that the algorithm can easily identify the number and suit of each card. Then the number of the card will be displayed on top or next to the card in real time since the processing will have been done before.
5. The logic for the statistics will also be done in python and then fed into unity for use in the program. Statistics known: (1) probability to stand, (2) probability to hit

Via TCP in Python, Game streaming host computer unity

Rendering unity, functionality for built-in helper functions; custom app; created scratch;

Battery runtime improved by rendering on host. Comparison since app can run on both; test by running on each

Object detection YOLOv3 since this method works in real time to overlay the card layout

Probability will be done in python; interfaced to unity via a custom API to interface game