The main idea of our project is a utility that automatically crops someone's face into a picture wherever the user defines using a physical artifact. This idea is motivated by a trend that we have observed where people who are missing from group photos are cropped in by their peers; to save the time it takes to do this manually in post processing, we want to create a utility where the head of a person is automatically cropped in. The physical artifact we envision is a piece of paper with a marker on it that someone in the photo would hold up where they desire their missing friend's head to be placed. A minimum viable product would be a tool that crops a face onto a static image, either uploaded from a gallery or taken live. An extension of this project would be to crop a face onto a live video feed by tracking the piece of paper and adjusting it in real time.

Both of our learning goals are aligned with gaining a better understanding of working with computer vision in Python, as well as developing skills in augmented reality. We plan on developing our skills in these areas using the OpenCV library, as well as Pygame for creating a simple GUI.

By the mid-project check-in, we hope to have something that can reliably determine the location of a piece of paper (with a marker) in any given image.

The biggest risks to our project will be in reliable detection of the physical marker, and that it will be very difficult to get to work in python.