Live Feed Augmented Reality

Background:

All across the country USACE Visitor Centers are struggling to keep up with the ever changing upgrades in technology. Many of our Visitor Center are just interpretive panels and possibly a viewing station or scenic overlook. Going forward we have created a new initiative with our Innovations Team, to get out and see what other agencies and the private sector is doing to draw in more visitors and to be able to speak to the through technology.   This Innovation, Live Feed Augmented Reality is something that we found at a "Behind the Lens" museum and several parts of the country. Having this technology modified to our purposes could help drive home the intpretive message we are trying to deliver.

Project Description:

Students working on this project will need to figure out who the mechanism behind this attraction works. In place there is a large screen with a live feed camera. Simply put, when someone walks in front of the camera, they are scene in the live feed with a normal background. However when the software recognizes a person's head, the software applies a random mask to that person and it follows them all across the live feed until they get out of camera range as see below:

This is the mechanism we would like for the students to help re-create with one twist. Instead of recognizing a head, could the software recognize a torso or chest in order to place a random life-jacket on the person?   If this could be achived this technology would drive home the mindset that everyone needs to wear their life jacket when around

the water. So instead of animals heads while looking into a live screen, you would see this:

Thanks for Wearing your Life Jacket today!

Outcome:

Students will be working along side our Innovations subteam for this innovation and will get to work with a professional federal agency. The students are expected to figure out how the process works and how to adjust and replicate. The goal is to be able to pilot this technology in at least one Visitor Center over the summer months. Students will need to handle all coding and software. Our Innovations Subteam will provide direction, graphics, and materials for long term use (projectors, TV monitors, etc.).