

**Tartanhacks
2025**

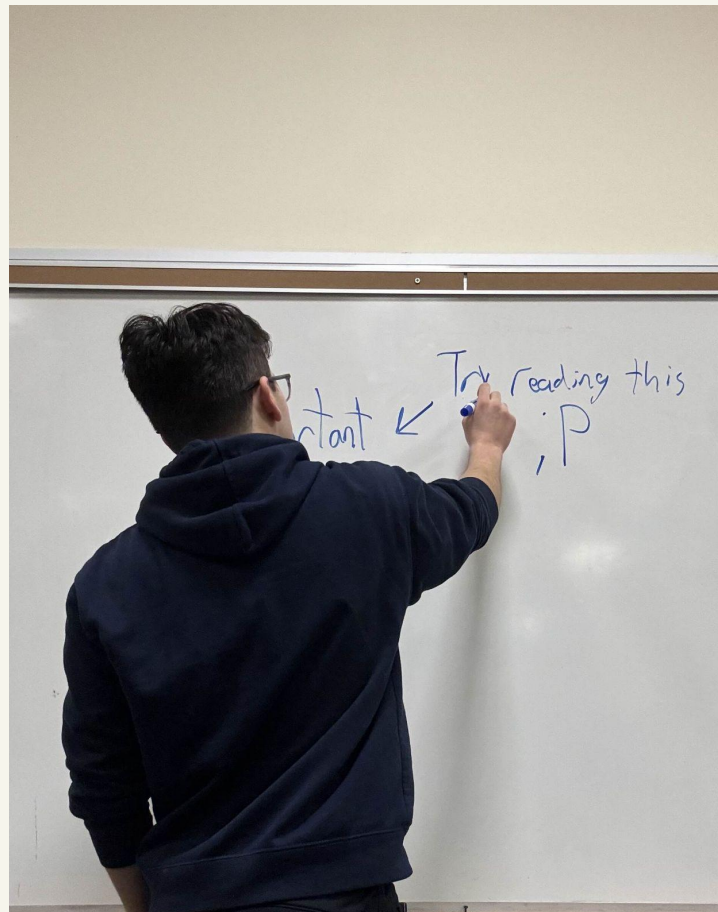
VisiBoard

Visible Boards mean Visible Lessons
Feb 8 2025



Teachers are Great

- But sometimes they forget that we can't see behind them
- This becomes an issue when students are trying to take notes in class



Our Solution:

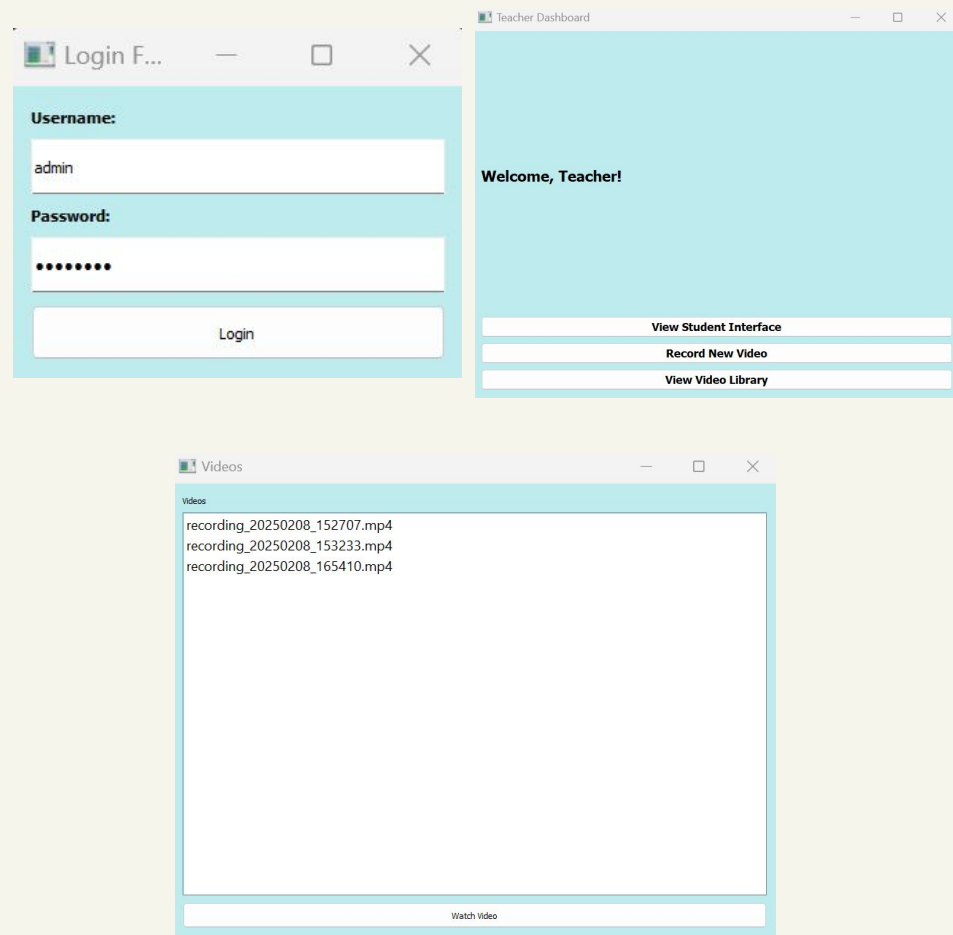
- Hide the person in front of the board so students can see what teachers are writing



We make the people invisible(translucent)

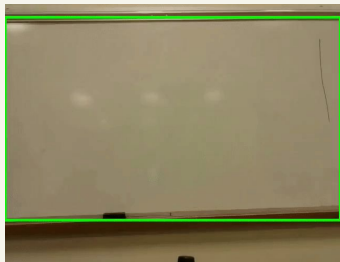
Our Platform

- Utilized PyQT5 to build a GUI that allows teachers to upload videos for students
- The videos are instructional whiteboard lessons but the teacher's body is edited out



How the Vision Works

Board Discovery



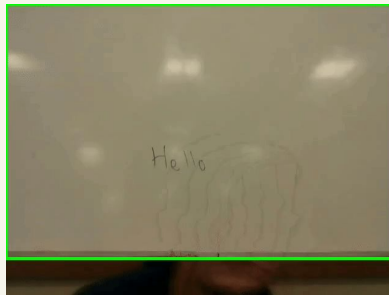
Create a mask of objects with whiteboard features. The largest object becomes our detection area

Ground Separation



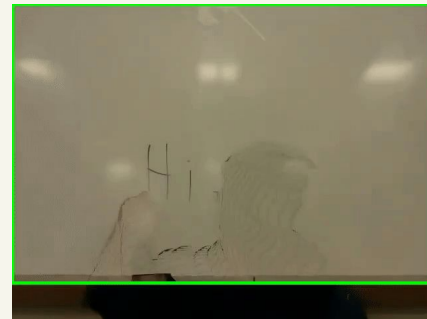
Separating people from the whiteboard! Write a buffer frame as our background and compare color differences between camera and buffer

Replace and Save



The foreground area is replaced with the buffer area. The background area is written to the buffer.

Write Away!



Our foreground masking ignores thin lines so your writing will be added to the background as soon as detected!

Demo

