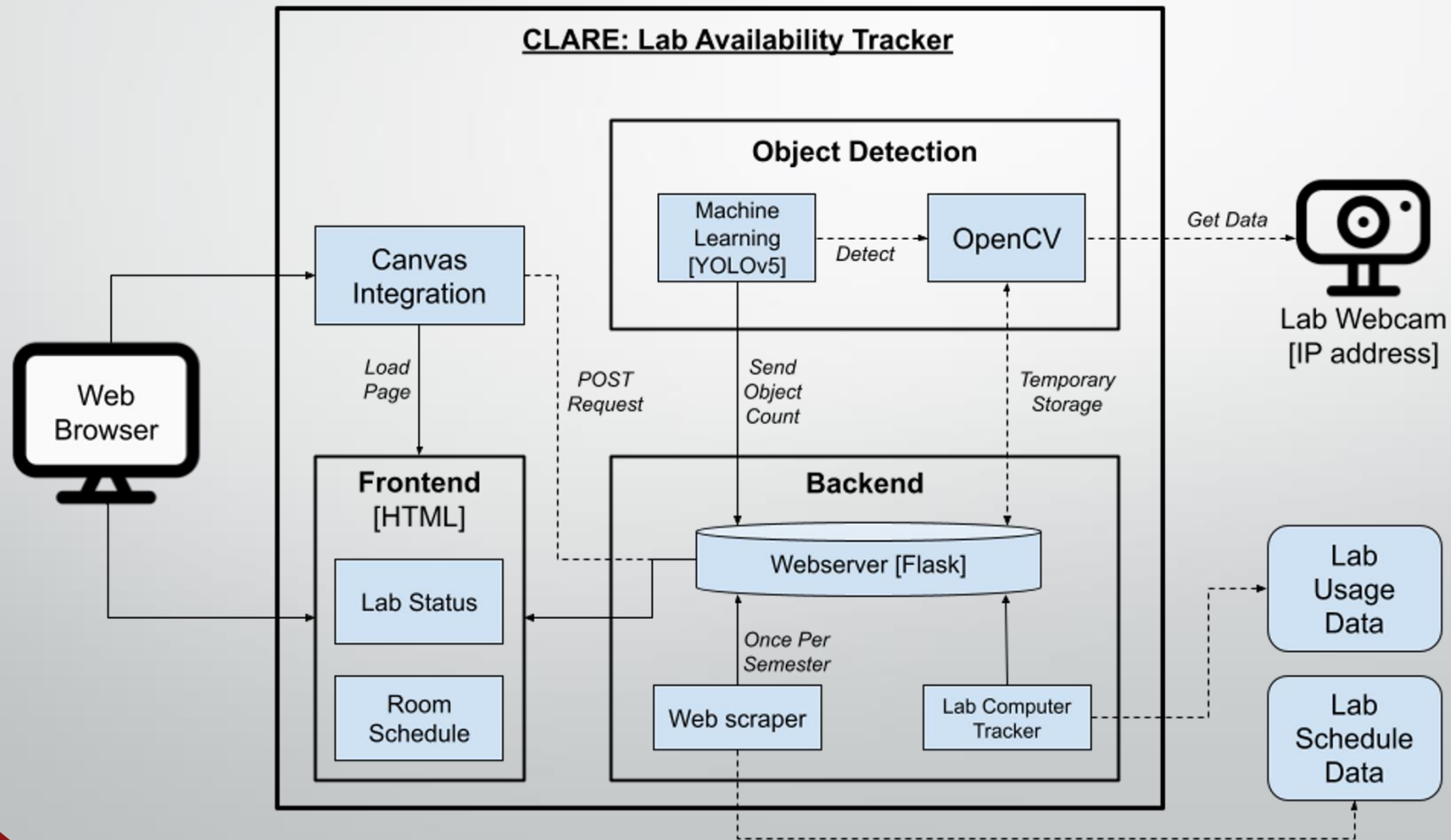# PIRM 1

SDDec23-04

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Problem

- Many engineering courses have assignments that require use of computer labs

- Labs have limited space and equipment

- Many labs do not have a way to check availability before going there

- Lab schedules are not readily available remotely

Solution Overview

- Collect lab usage data
  - Cameras and ML model
  - Computer usage data
- Collect lab schedule data from ISU
- Combine data and display it intuitively on website
- Integrate website with Canvas

Technical Overview

Goals

- Fine-tune the camera ML for an indoor lab setting
  - Our current dataset is a general one, choose one that is more suited for us
- Create the website
- Integrate our solution with Canvas
  - Handle a POST request as specified in the Canvas API
  - Work with the Center for Excellence in Learning and Teaching to add our app
- Develop an app to track computer usage to supplement camera
  - Track if a user is signed in
  - Compatibility with both Windows and Linux

Technical Challenges

- Creating a user-friendly frontend

- Latency and accuracy of machine learning algorithm

- Developing Linux processes to track logins and comparing data to machine learning approach

- Scalable website performance

- Ensuring security and privacy for data collected
  - Camera data, computer usage data, etc.

Thanks for Listening

Questions?