

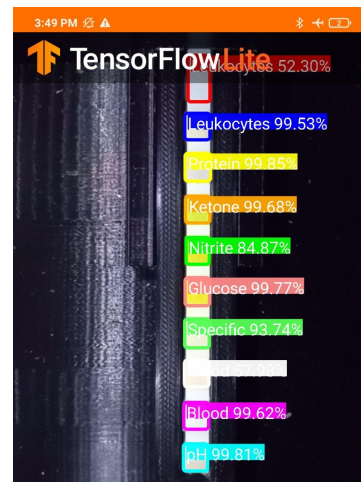
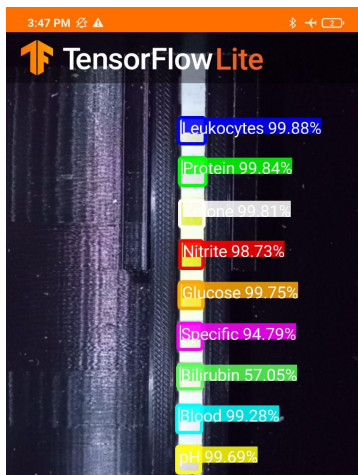
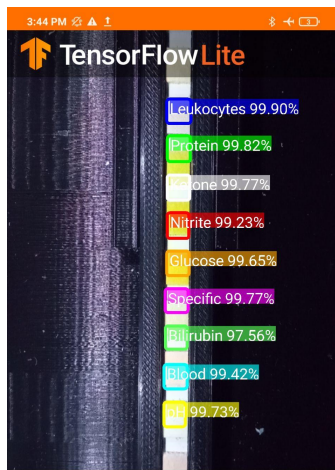


RUTGERS

April 18, 2022 Update

TestStripDX

- Here is how the app is working with different test strips -

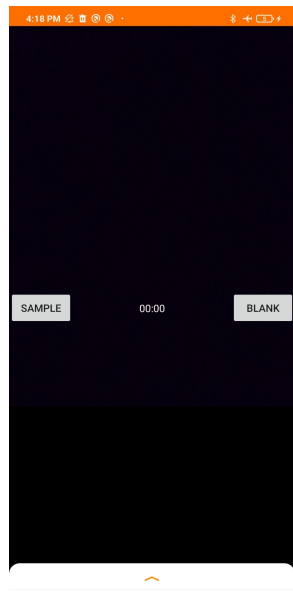
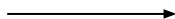
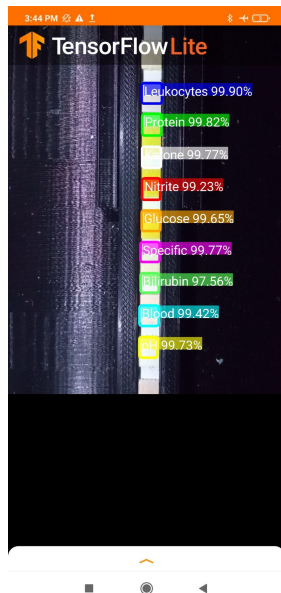


- From what we can see, the app is able to pick up and analyze the colors well
- We know this because similar results are coming from each

TestStripDX Updates (Pt. 1)

- Made some changes to the UI
 - Had to include the Blank & Sample buttons on the camera page so that there is functionality for those buttons on that page
 - Ran into some issues while changing UI, but things are still working now

- Pictures:



- Initially, I wanted to put the button and the timer on the bottom “black” portion of the screen, but because of the relative layout in the .xml file, it is very difficult to change anything in the bottom part without changing the rest of the part.

TestStripDX Updates (Pt. 2)

- Blank button has functionality now
- Sample button has (some) functionality now, and saves the data to the device for the 4 chemicals we are interested in
 - Glucose @ 30s
 - Ketone @ 40s
 - Blood @ 60s
 - Leukocytes @ 120s

- Pictures:

```
timerTask = new TimerTask() {  
    @Override  
    public void run() {  
        runOnUiThread(new Runnable() {  
            @Override  
            public void run() {  
                time++;  
                timerView.setText(getTimerText());  
            }  
        });  
    }  
};  
  
timer.scheduleAtFixedRate(timerTask, delay: 0, period: 1000);
```

TestStripDX Updates (Pt. 3)

- The timer works mainly behind the screen and its functionality happens all on the backend
- I put the timer on the screen just to help the user see what is happening

- Pictures:

```
sample2Button.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View view) {  
  
        if(getTimerText().equals("00:30")){  
            //get glucose and analyze it  
        }  
  
        if(getTimerText().equals("00:45")){  
            //get ketone and analyze it  
        }  
  
        if(getTimerText().equals("01:00")){  
            //get blood and analyze it  
        }  
  
        if(getTimerText().equals("02:00")){  
            //get leukocytes and analyze it  
        }  
  
    }  
});
```

- The timer I have right now runs on the main thread of the app and is using up too much ram, crashing the whole app. I am going to implement a timer that uses much less memory, to keep the system running.

TestStripDX Updates (Pt. 4)

- Sample button functionality is in the works, the stuff I have left is making sure the device can re-do the picture analysis multiple times
 - I also have to work with saving data in this case over here

```
// -> method is going to return a red, blue, and green value each, each in a different integer variable

for (int x=xMin; x<xMax; x++) {
    for (int y=yMin; y<yMax; y++) {

        // run the object detection method in here

    }
}
```

- Given xMin, yMin, xMax, and yMax , I am able to find everything I need to know
- I also need to know the name of the image, so I know what kind of object detection to run

CoralDX Update

- The same issues at TestStripDX
- Need to know how to find coordinates and name of detected square

Final Task

- Find the coordinates of the highlighted box to be able to analyze them.