

Creative Coding Midterm

Webcam Particle Interaction

Sunny

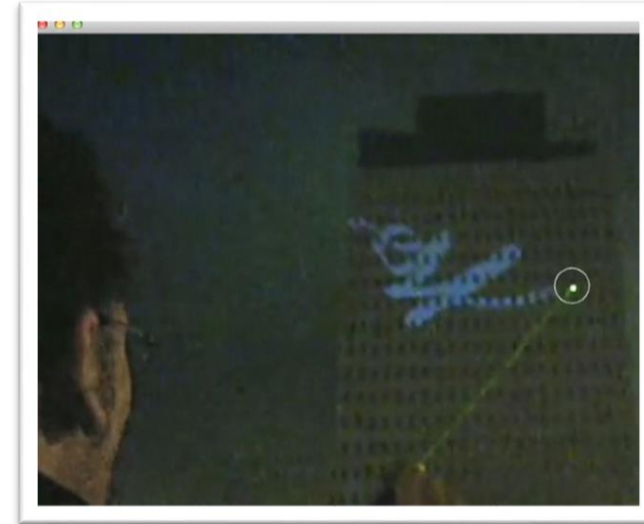
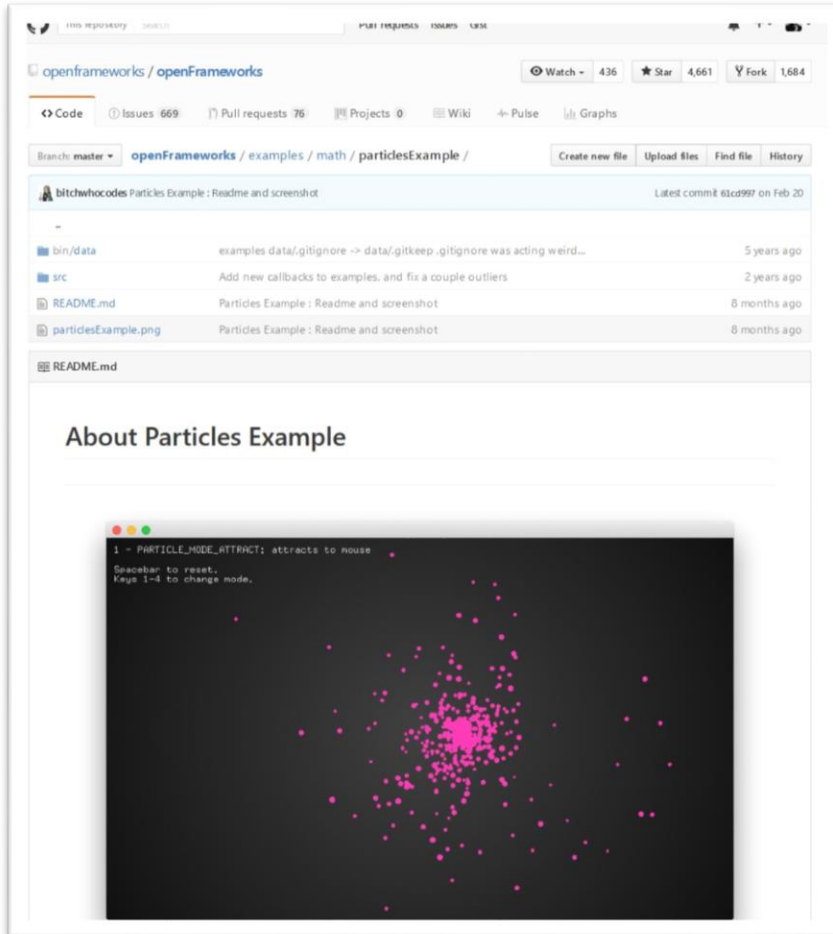
10/20/2016

Concept



My goal for the midterm project is to create a particle system using live webcam feed and adding attraction and repulsion function to it.

Inspiration



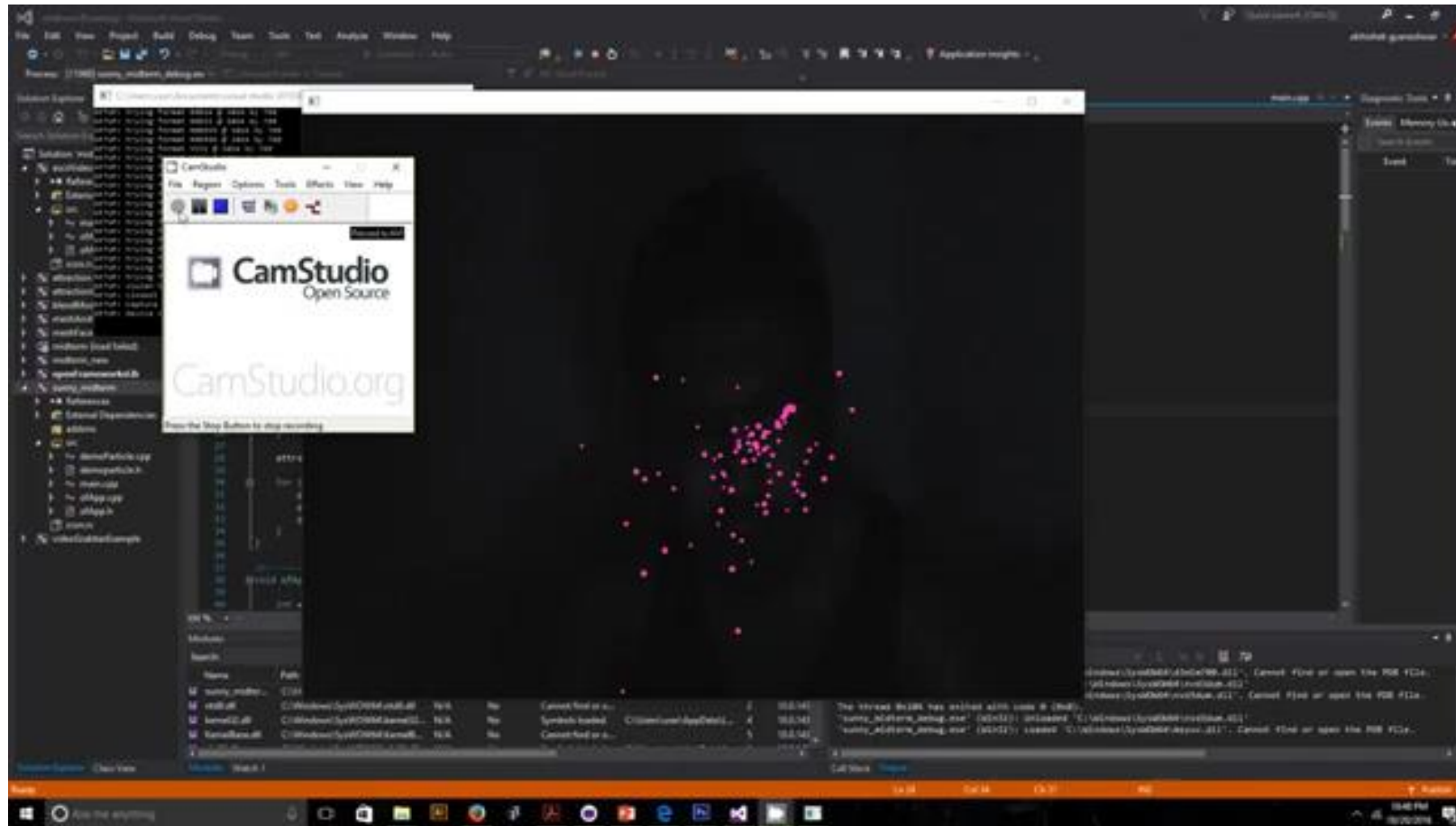
Finding the brightest pixel in an image:

http://openframeworks.cc/ofBook/chapters/image_processing_computer_vision.html#preliminariestoimageprocessing

The Meat

```
//-----  
void ofApp::update() {  
  
    int w = vidGrabber.getWidth();  
    int h = vidGrabber.getHeight();  
  
    light = 0;        // to find the brightest spot  
    lightX = 0;       // in the video  
    lightY = 0;  
  
    //Searches through every pixel finds the brightest one  
    for (int y = 0; y < h; y++) {  
        for (int x = 0; x < w; x++) {  
  
            ofColor colorXY = vidGrabber.getPixelsRef().getColor(x, y);  
  
            float lightXY = colorXY.getBrightness();  
  
            if (lightXY > light) {  
                light = lightXY;  
                lightX = x;  
                lightY = y;  
            }  
        }  
    }  
  
    for (unsigned int i = 0; i < p.size(); i++) {  
        p[i].setMode(currentMode);  
        p[i].setXY(lightX, lightY);  
        p[i].update();  
    }  
  
    for (unsigned int i = 0; i < attractPointsWithMovement.size(); i++) {  
        attractPointsWithMovement[i].x = attractPoints[i].x + ofSignedNoise(i * 10, ofGetElapsedTimef() * 0.7) * 12.0;  
        attractPointsWithMovement[i].y = attractPoints[i].y + ofSignedNoise(i * -10, ofGetElapsedTimef() * 0.7) * 12.0;  
    }  
  
    vidGrabber.update();  
}
```

Demo



THANK YOU