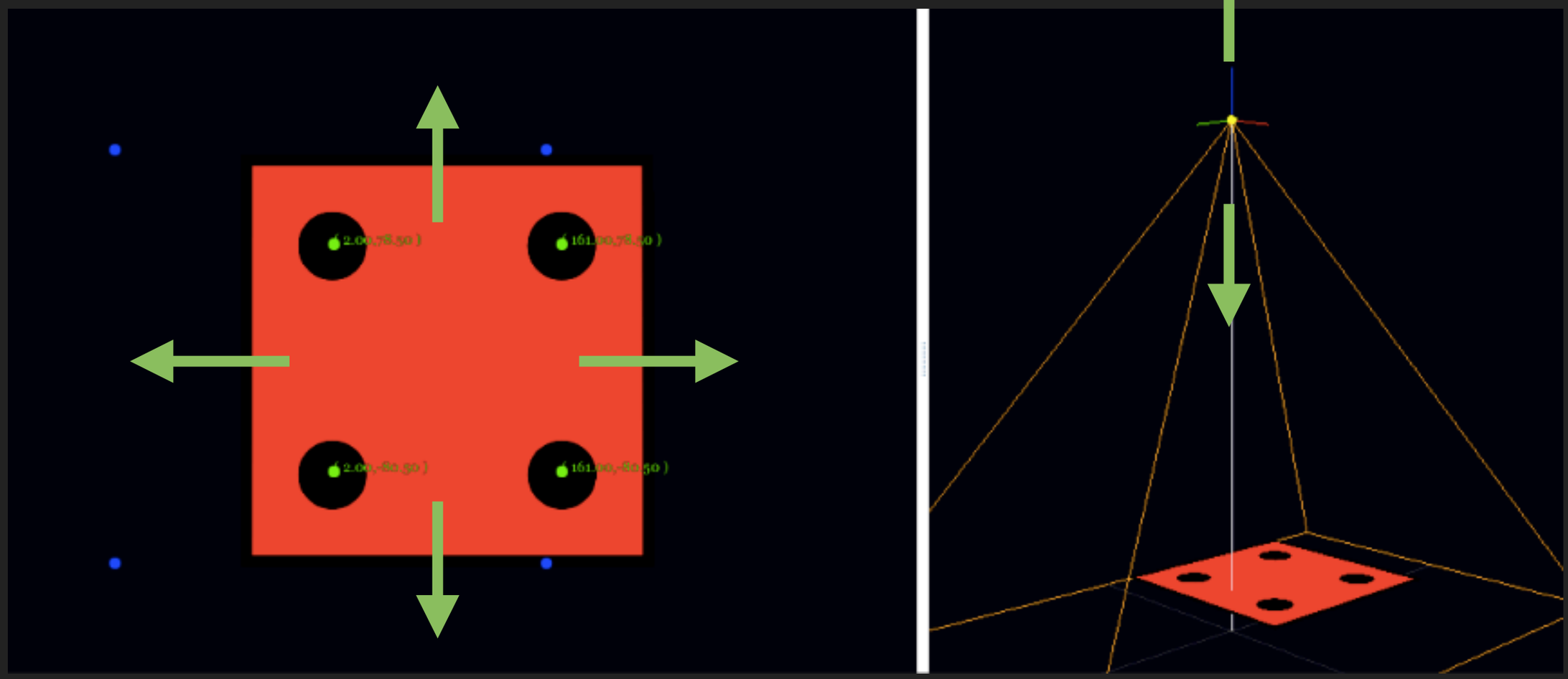
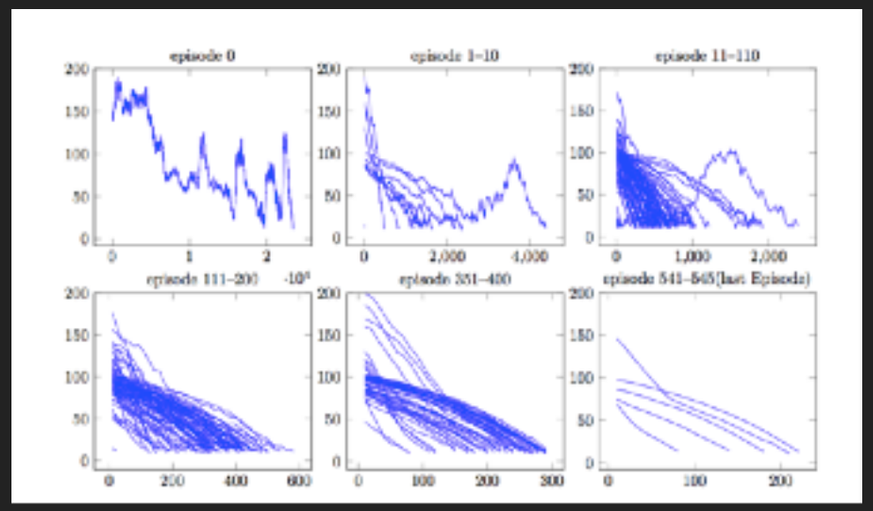
VISUAL SERVING USING DEEP-Q LEARNING

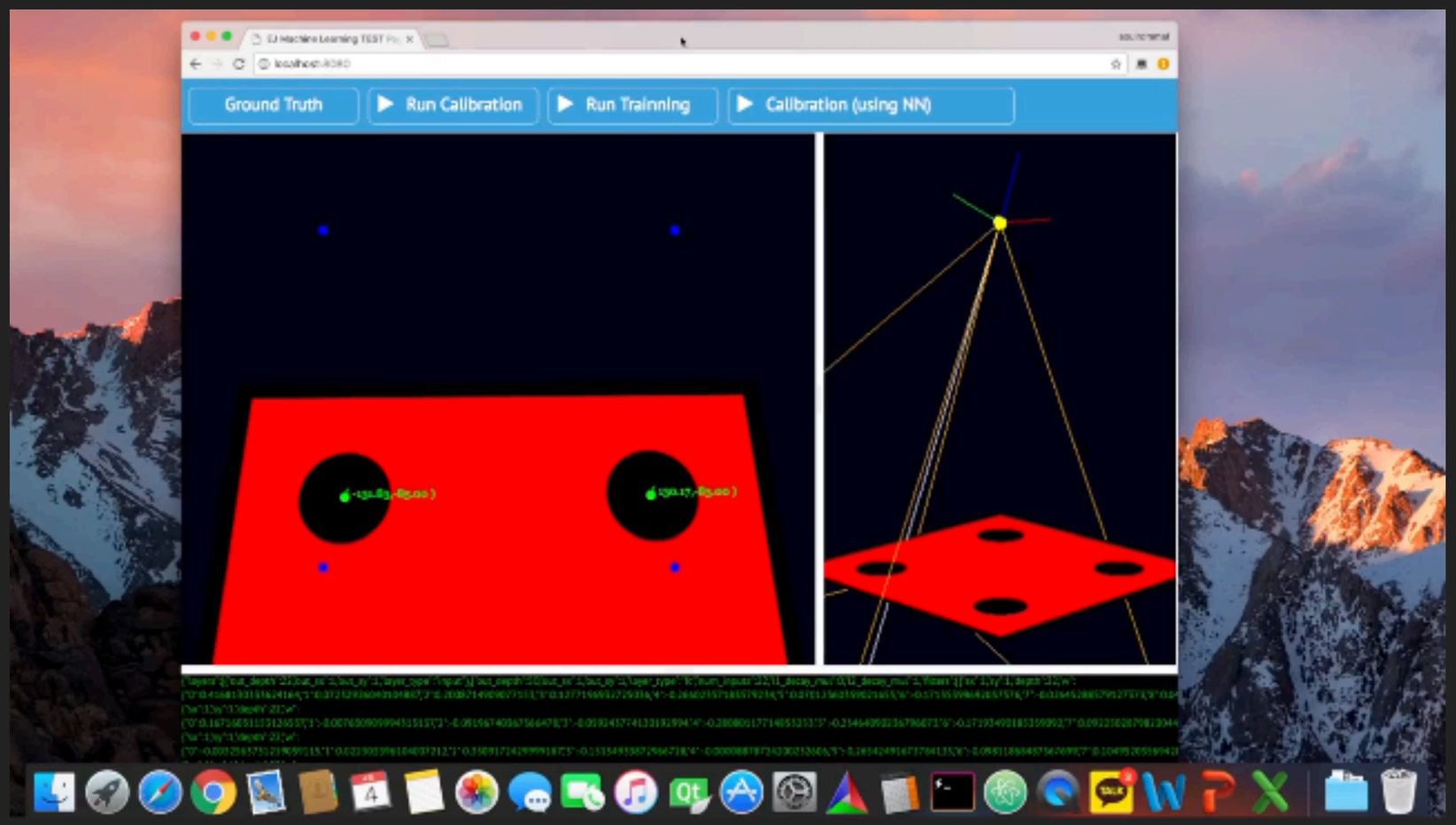


- S : four 2D point vectors on camera screen
- A : move (Top, Bottom, Forward, Backward, Right, Left)
- r: Error variation

EXPERIMENT

```
camera.RandomPosition()
for t in T do
    a_t = argmax(Q(s, a;θ))
    cam_pos = cam_pos + a_t
    E_t = Error(x_{t+1}) - Error(x_t)
    if E ≥ 0 then
        r_t = 1.0
    else
        r_t = -1.0
     agent.Backward(r_t)
    if r_t leq 10.0 then cam_pos = random
```





- Episode Start : Camera Random Position
- Episode Done : When Error < N