

Chess 2.1

Casper V. Kristensen
Alexander Munch-Hansen

Idea



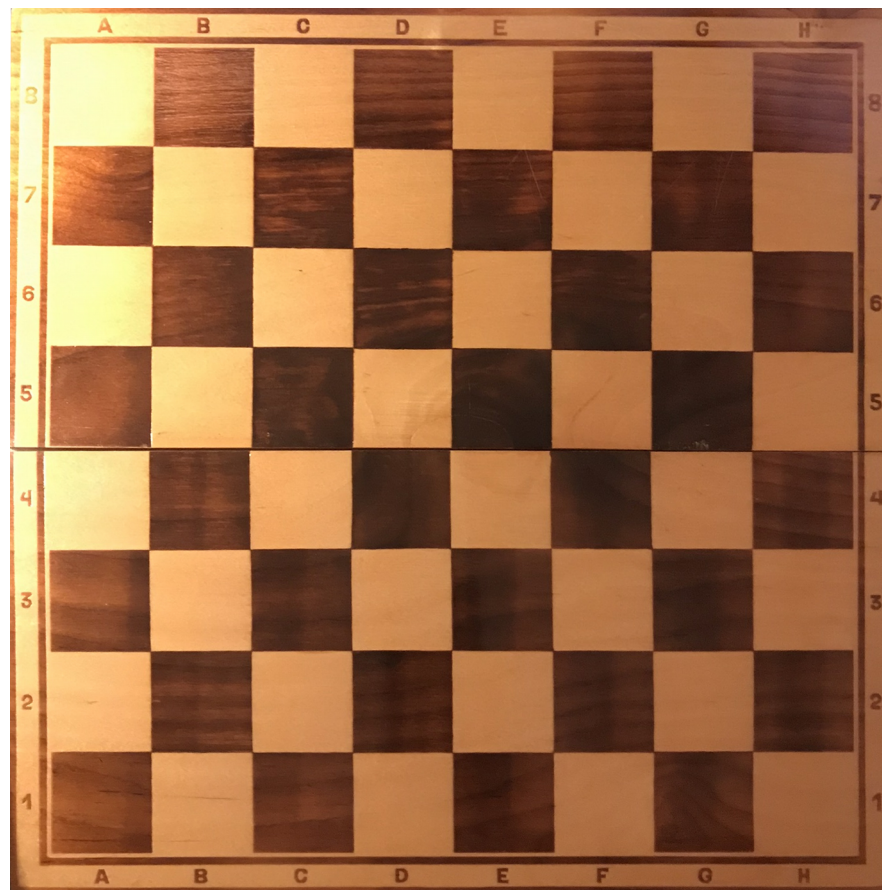
Camera Image



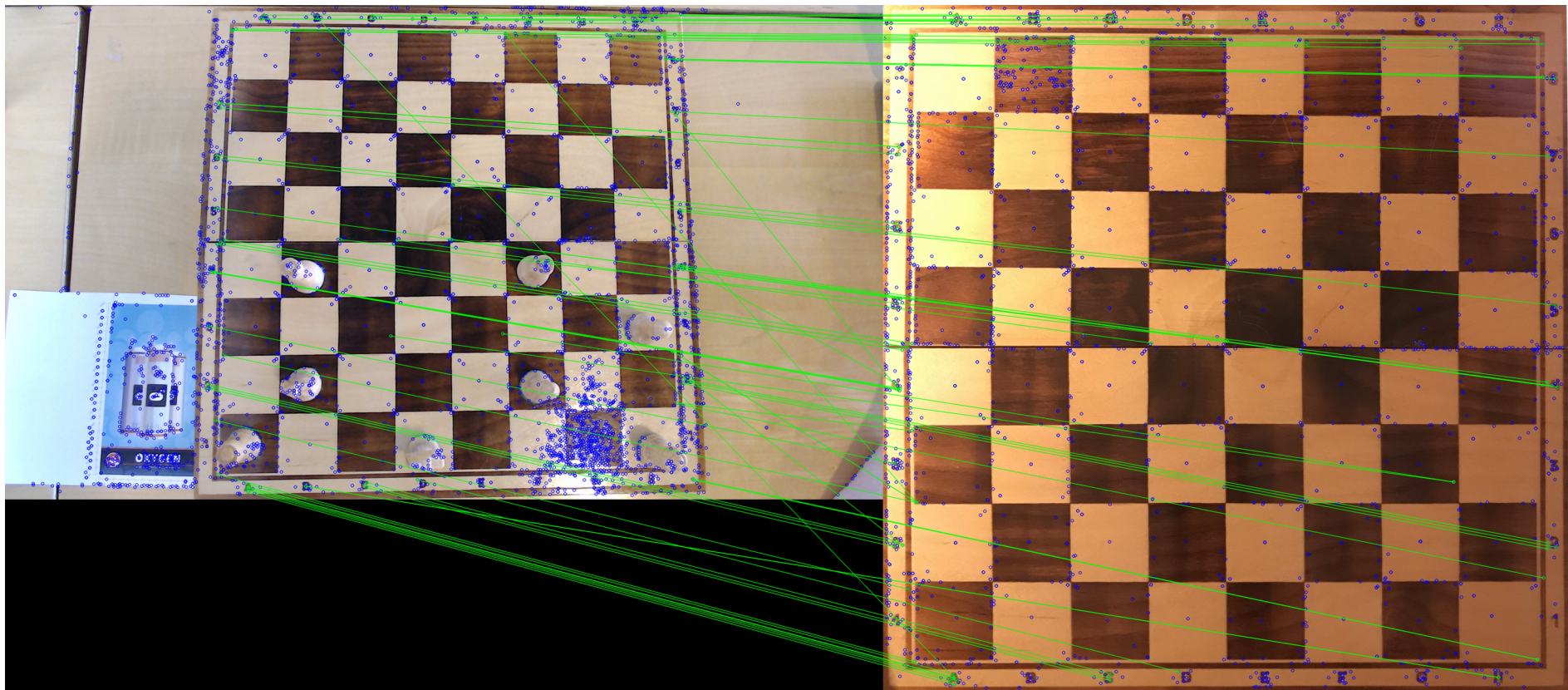
Keypoints



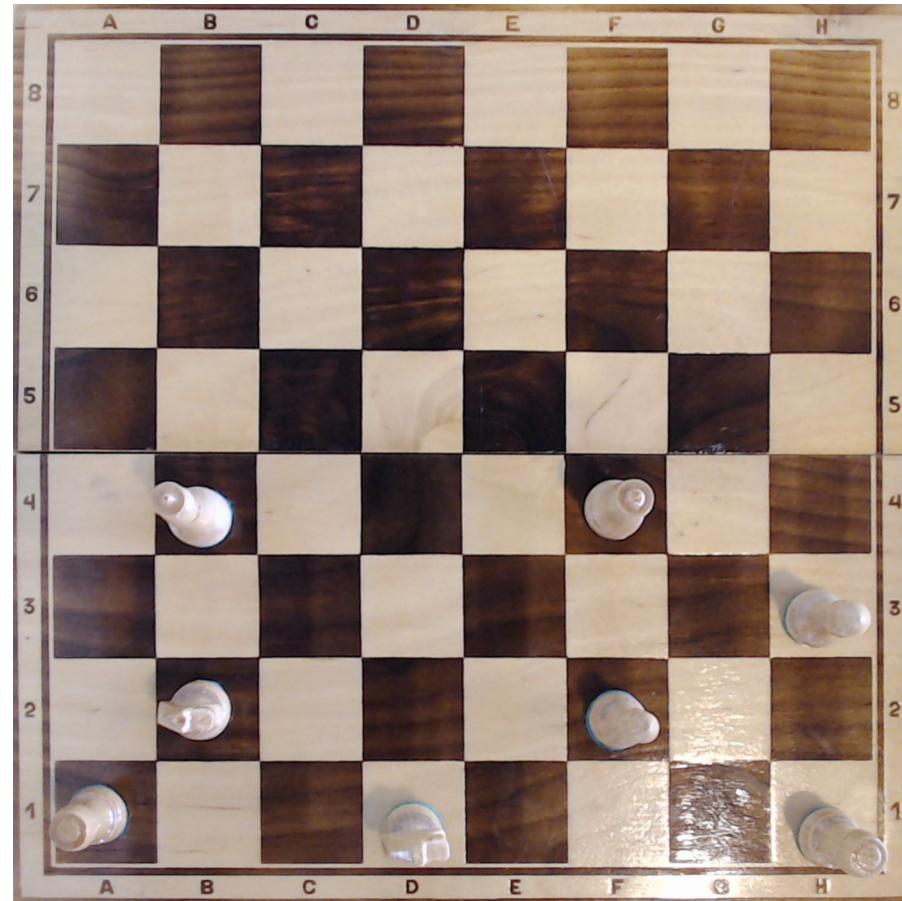
Baseline Board



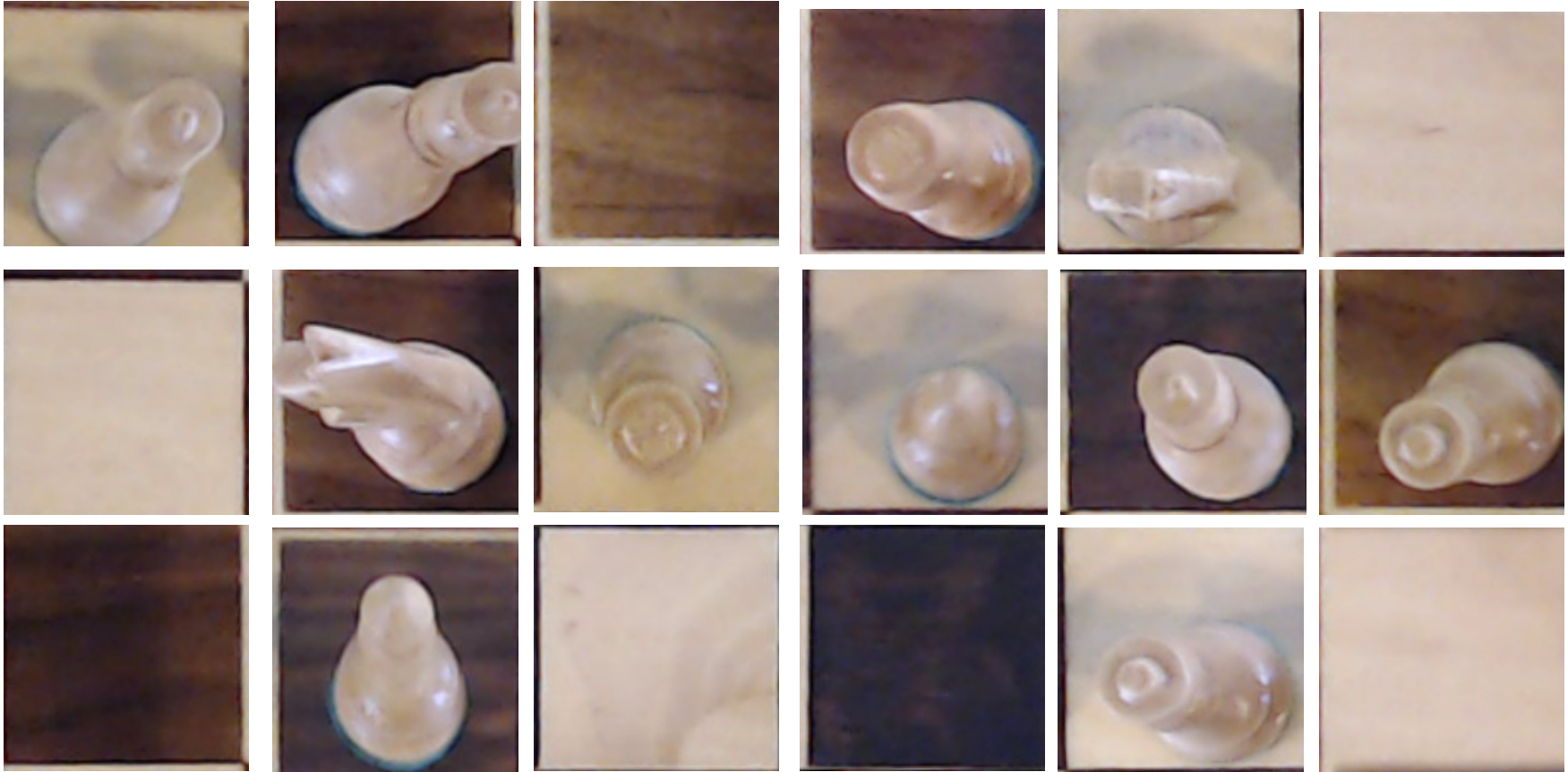
Matches



Warped Board



Squares

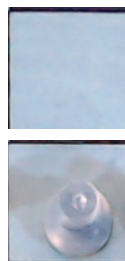
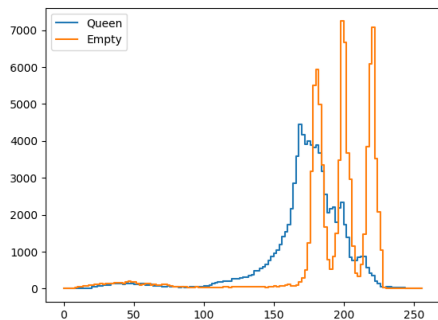
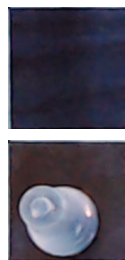
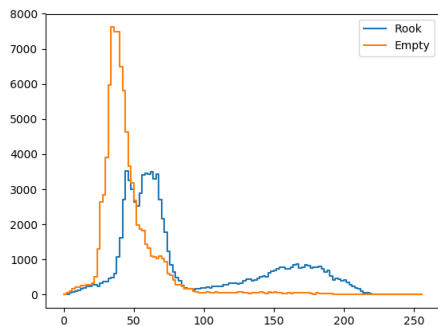


Idea Graveyard

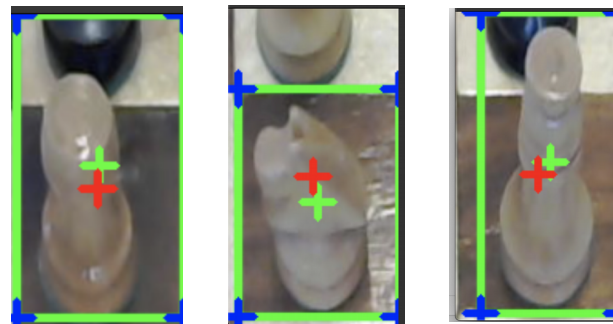
Segment Detection



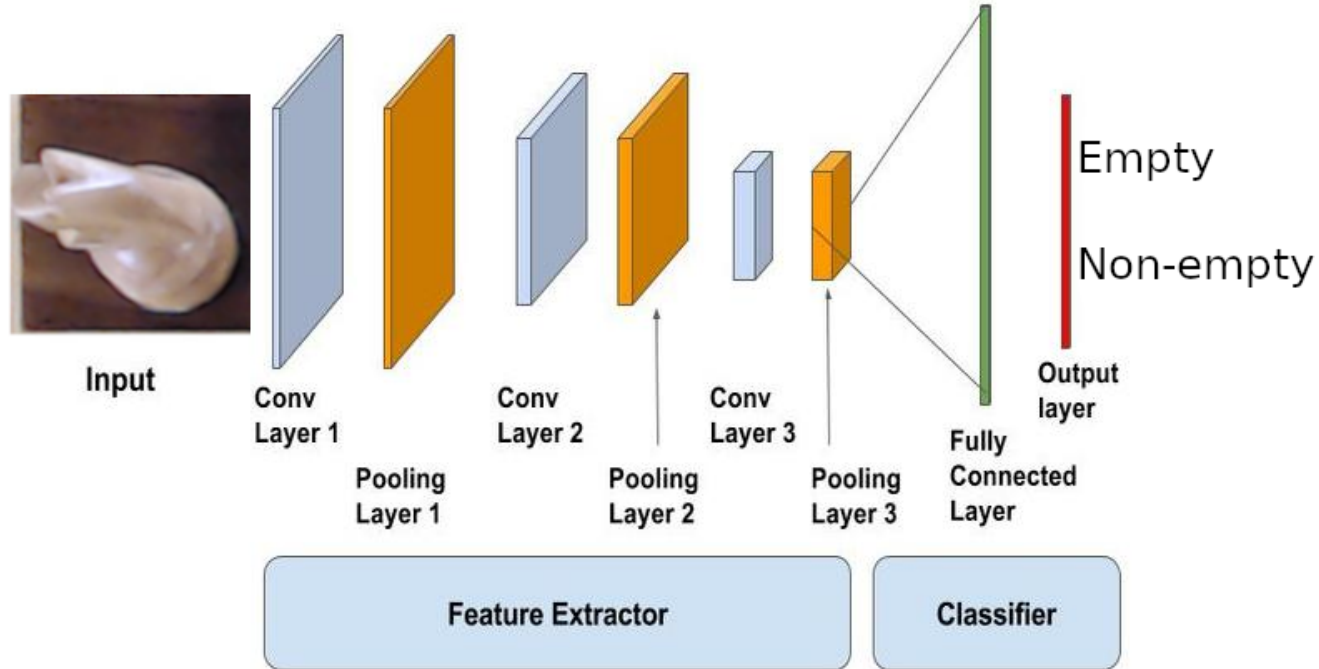
Histogram SVM



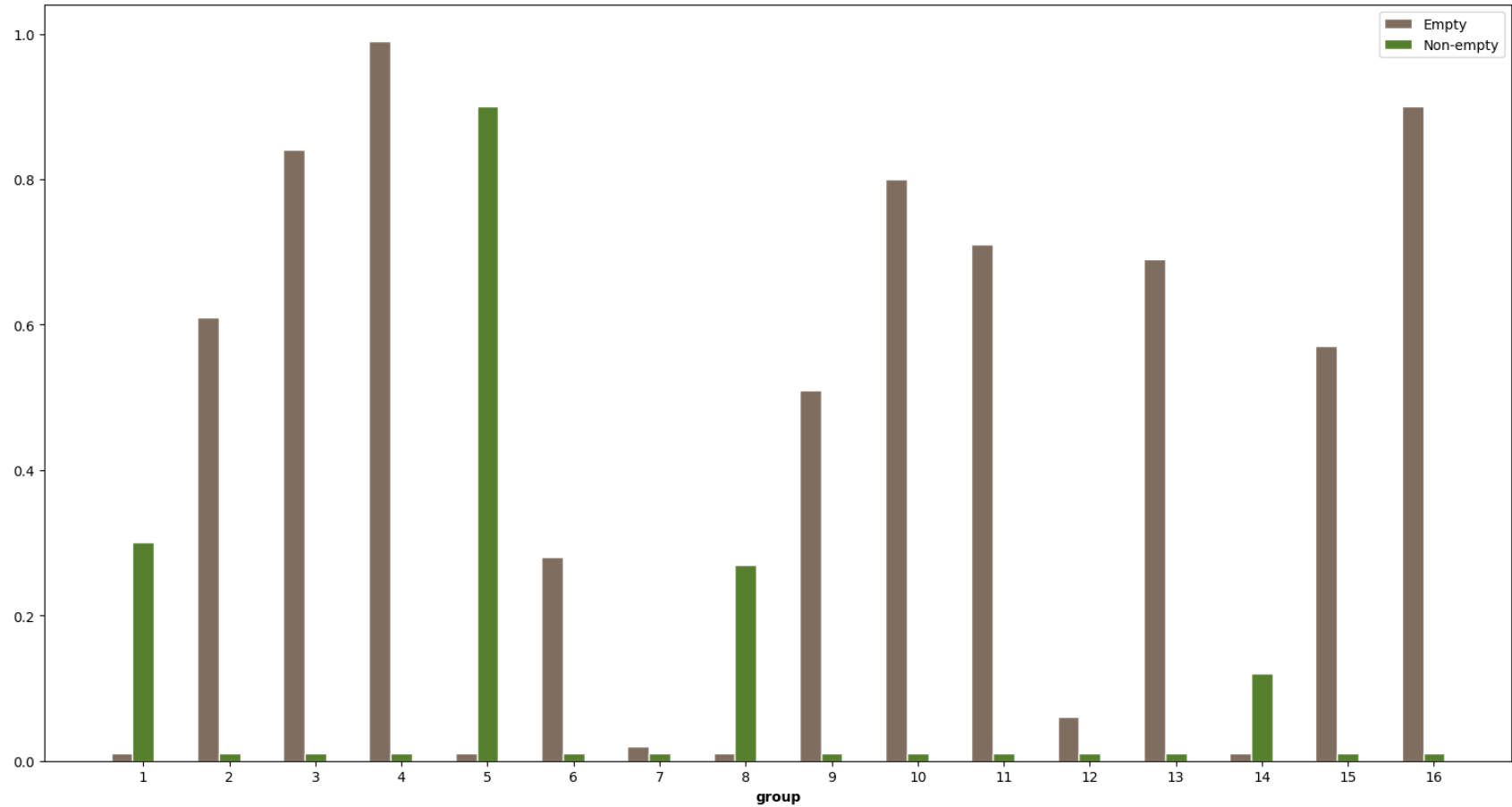
Connected-component labeling



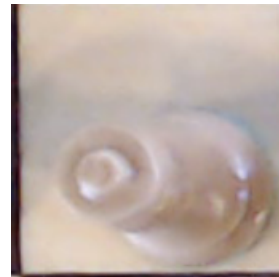
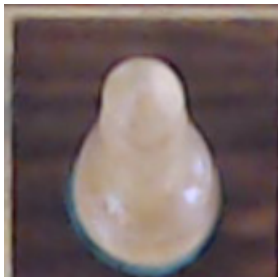
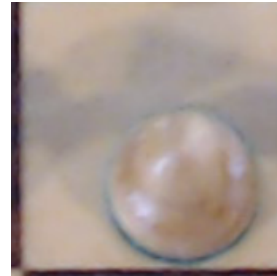
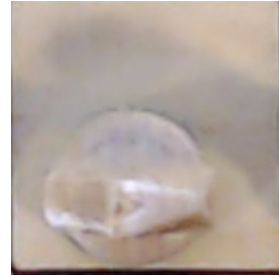
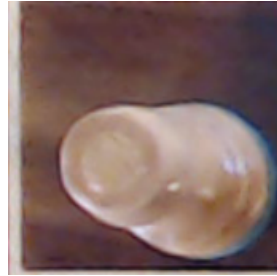
Classifying Empty



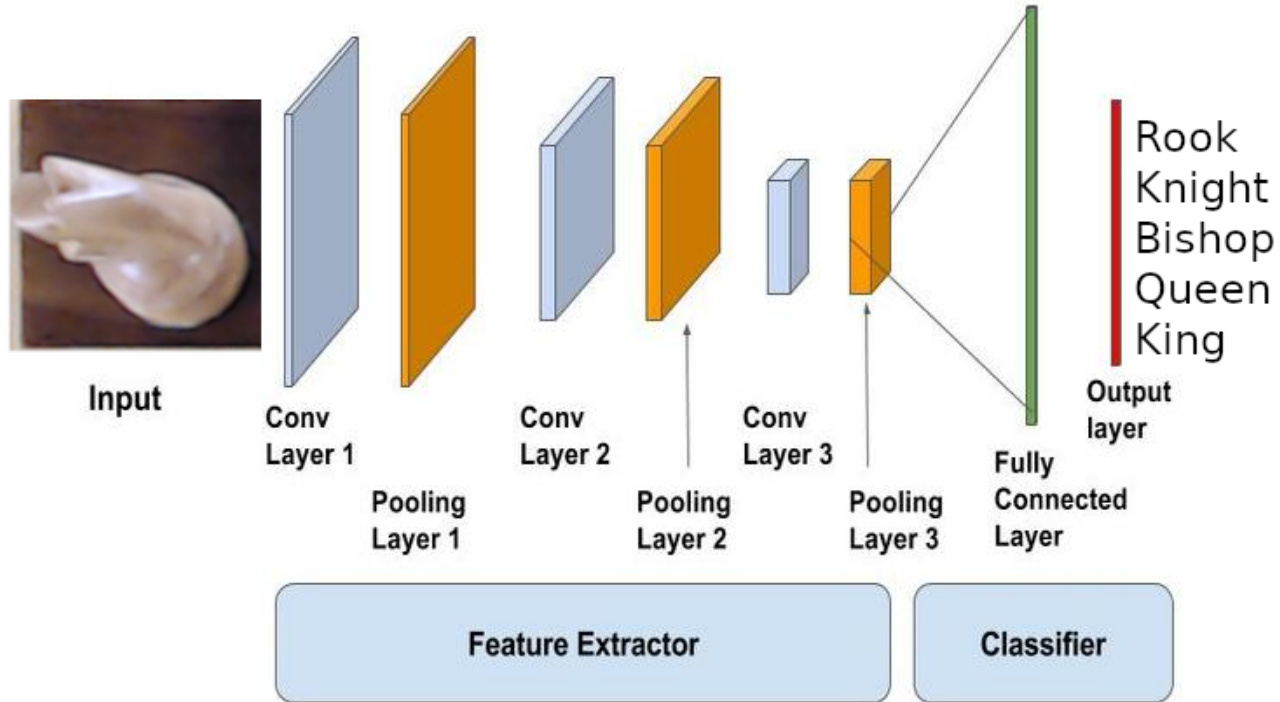
Classifying Empty



Occupied Squares



Classifying Piece



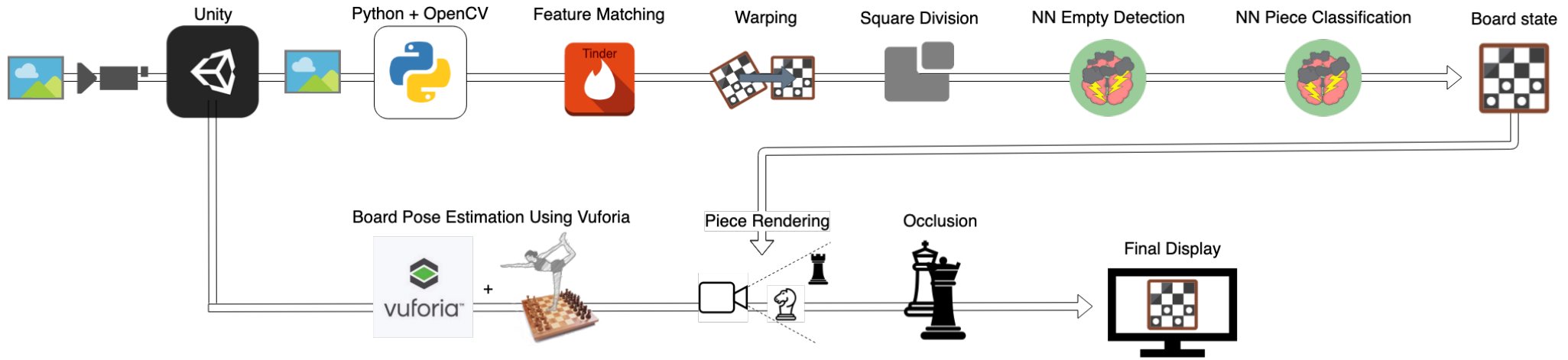
Classifying Piece

Rook	Knight	Bishop	King	Queen
0.00	0.00	0.72	0.08	0.19
0.77	0.00	0.00	0.00	0.22
0.05	0.00	0.01	0.54	0.39
0.00	0.00	0.00	0.49	0.51
0.01	0.00	0.99	0.00	0.00
0.97	0.00	0.00	0.01	0.02
0.00	1.00	0.00	0.00	0.00
0.00	0.99	0.01	0.00	0.00

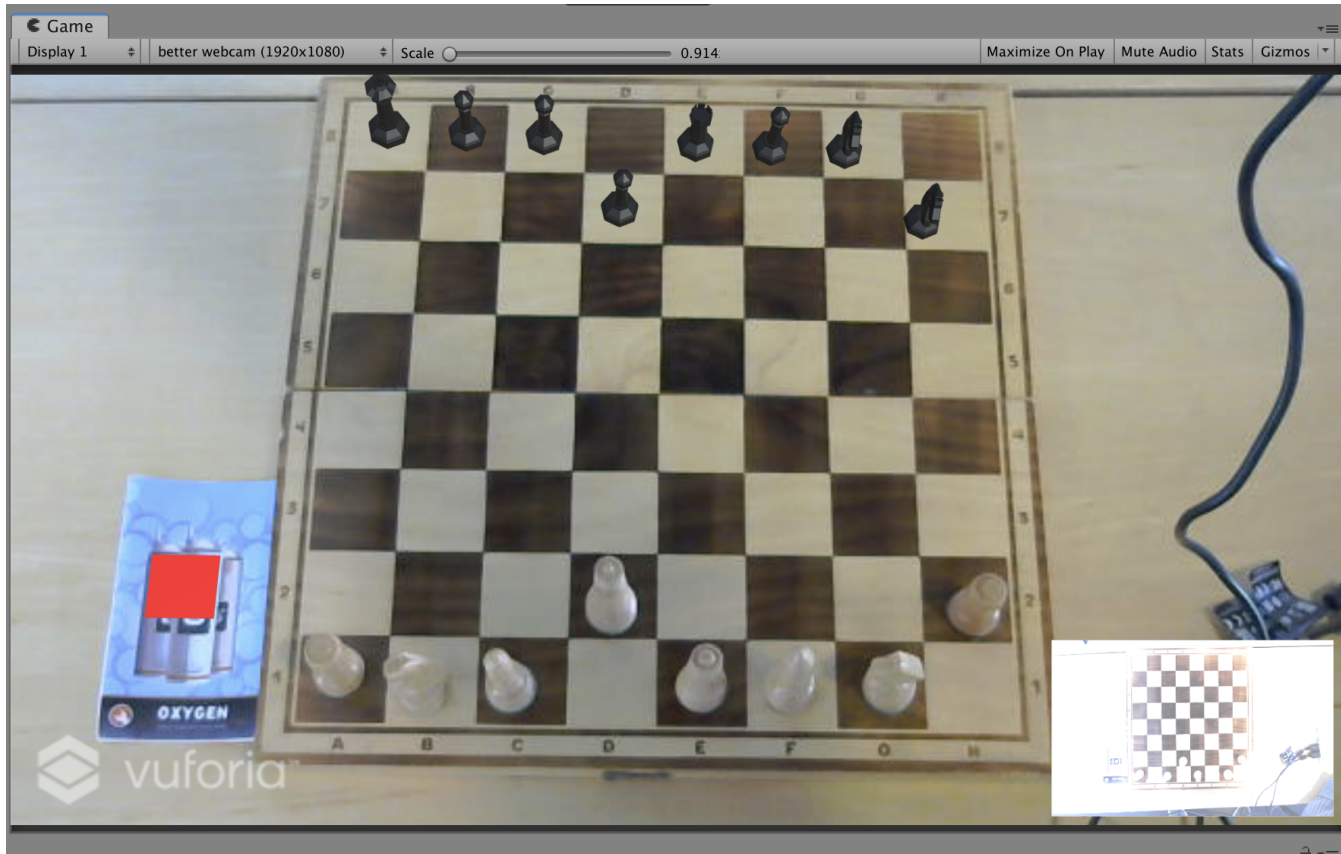
Neural Network Classification



Architecture



Unity



Occlusion

