Neural Network Training

- guess values
- improve guess
- repeat until “close enough”

Iterations

100

Polynomial Order (N)

3

$$y = -0.5x^3 + 0.8x^2 + 0.2x - 0.7$$

Coefficients

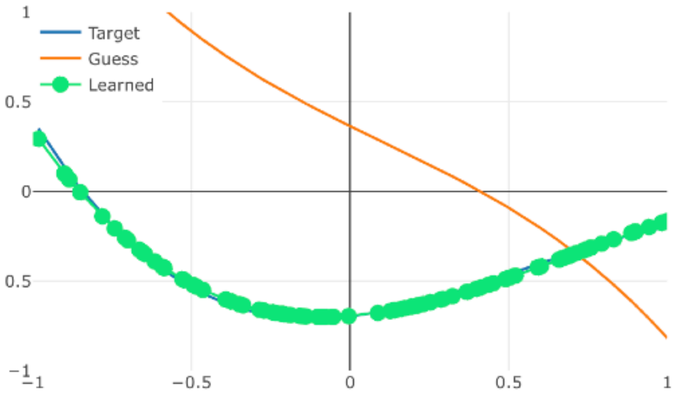
c0

c1

c2

c3

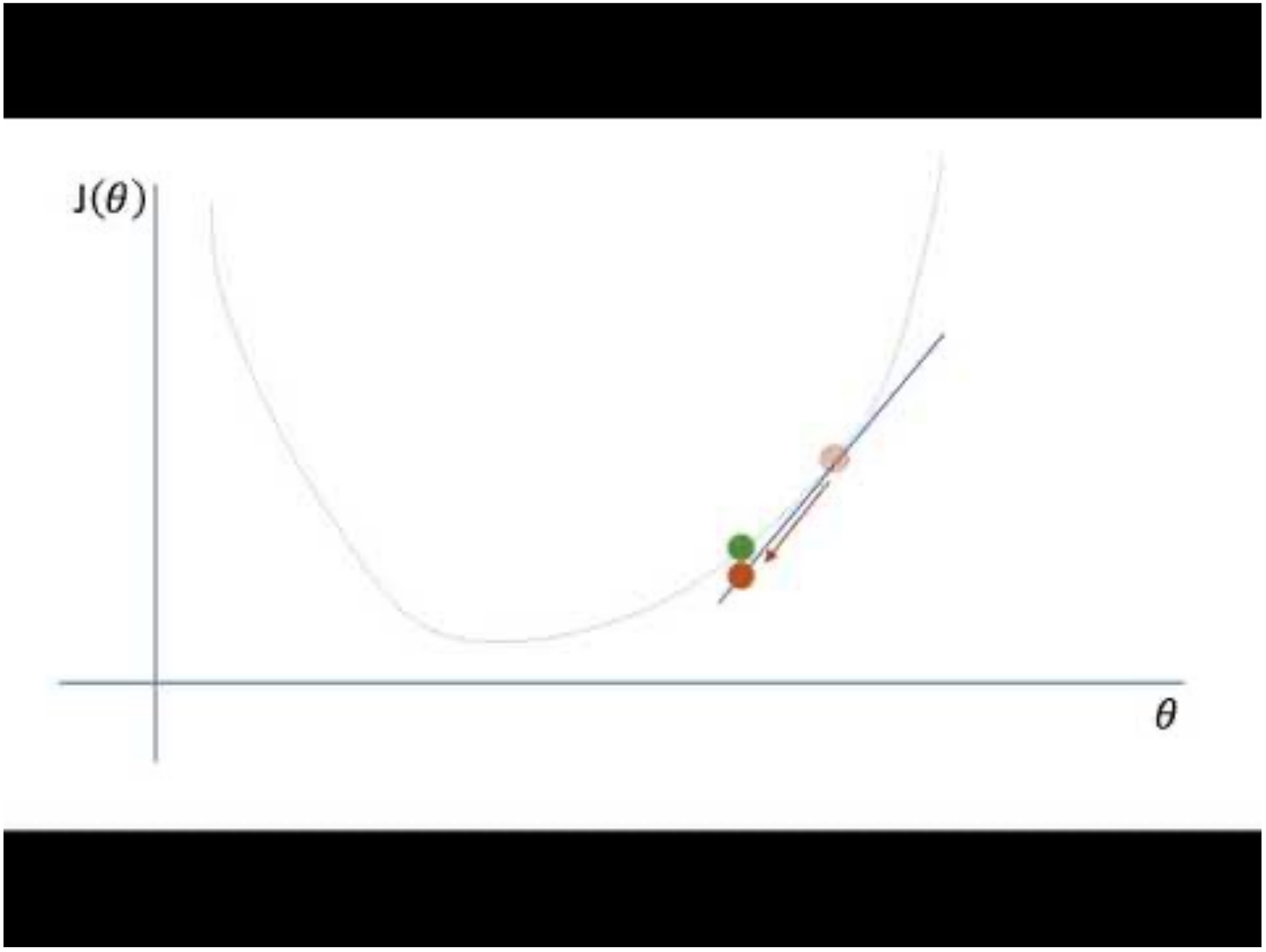
Reset Guess Learn



Iteration = 100, Loss = 0.00031277

Coefficient	Target	Predicted
Coefficient 0	-0.5	-0.38080
Coefficient 1	0.8	0.78087
Coefficient 2	0.2	0.12938
Coefficient 3	-0.7	-0.69594

As you can see, the learned polynomial starts out following the initial curve, and fairly quickly moves to minimize the error between it and the target polynomial. The green dots you see are reminding you that we're using a discrete set of points to perform these calculations (the number of which you can vary in the appendix).


J(θ)
θ