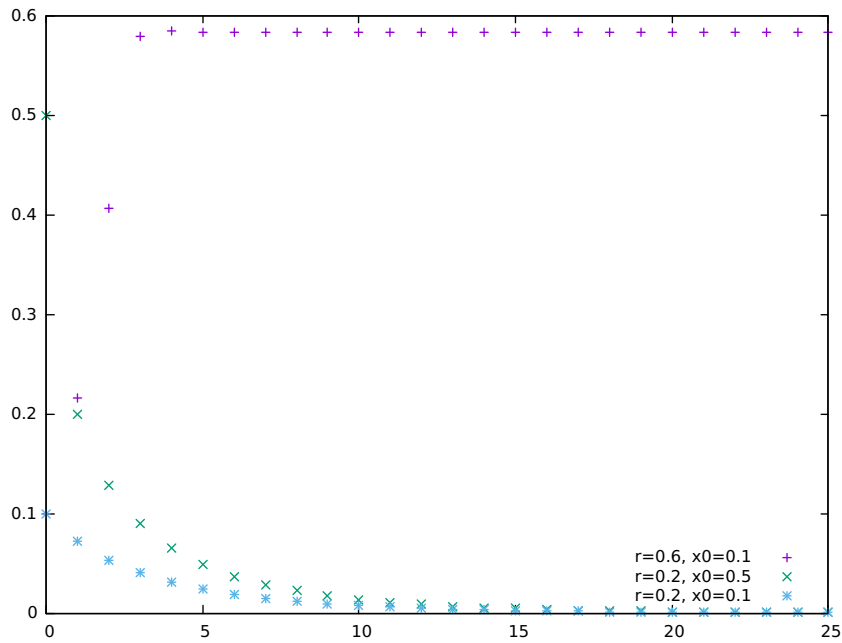


Lab3

David Mathews

February 2, 2018

Part 1

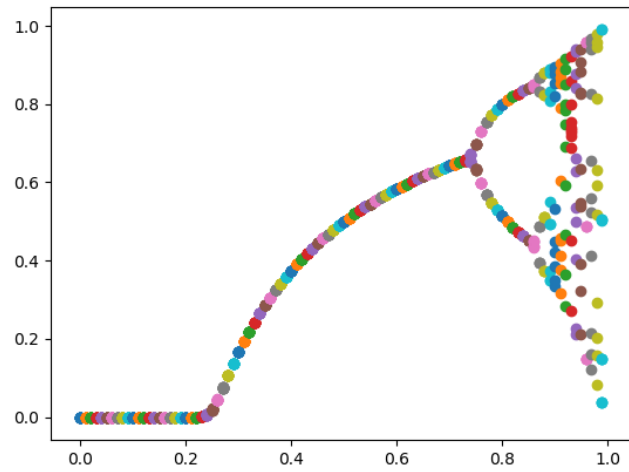


In this graph, there are 3 different sets of data that were graphed with different initial conditions. These initial conditions are shown below.

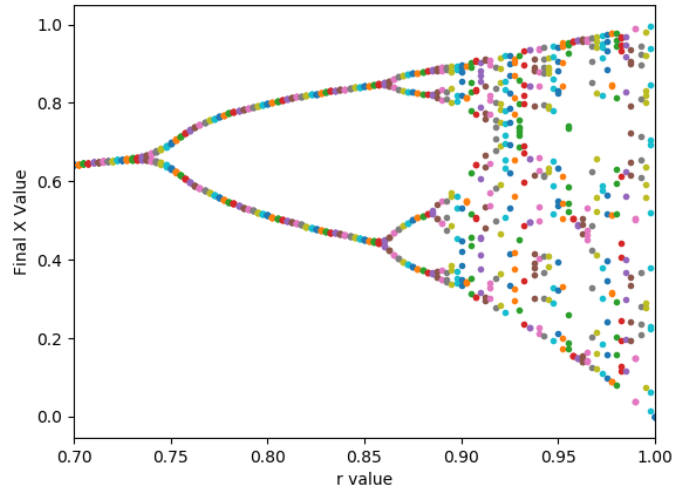
Color Label	r	x0
Pink Cross	0.6	0.1
Green X	0.2	0.5
Blue Star	0.2	0.1

With these three conditions we can see that a change in the initial position, but with the same r value will result in the same final location. We can also see that if we have the same starting location with two different r values we will find a different end location. It appears that the r value is what will determine the final end location.

Part 2



Over the whole range, we can see that the final value is initially 0 for very small values of r and then increases up to around 0.7 before the splitting occurs. This splitting has some interesting behavior which is examined further in the next plot.



If we continue to zoom in, the same behavior will continue.

