

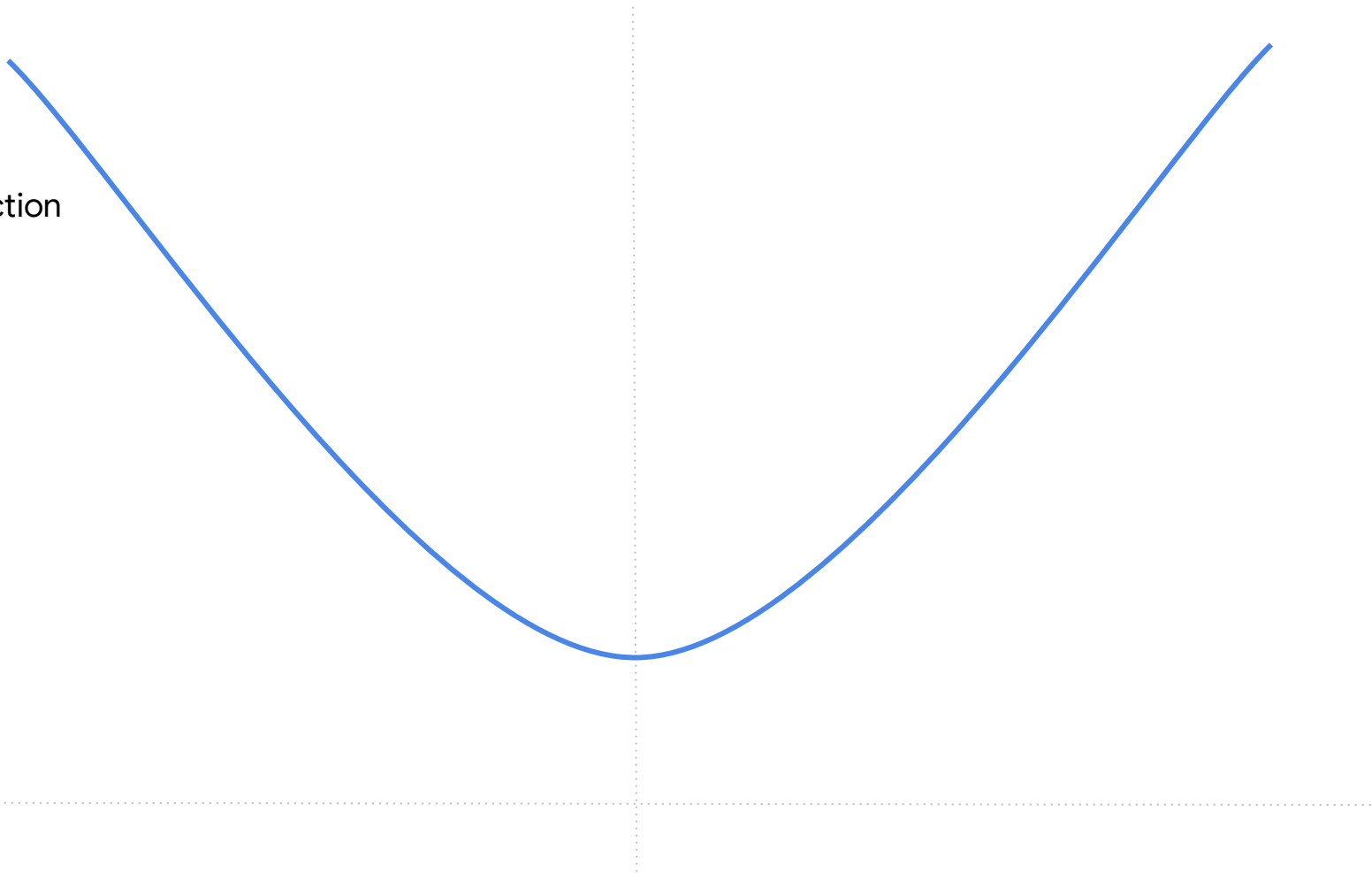
# Minimizing loss...

Moving down the curve...



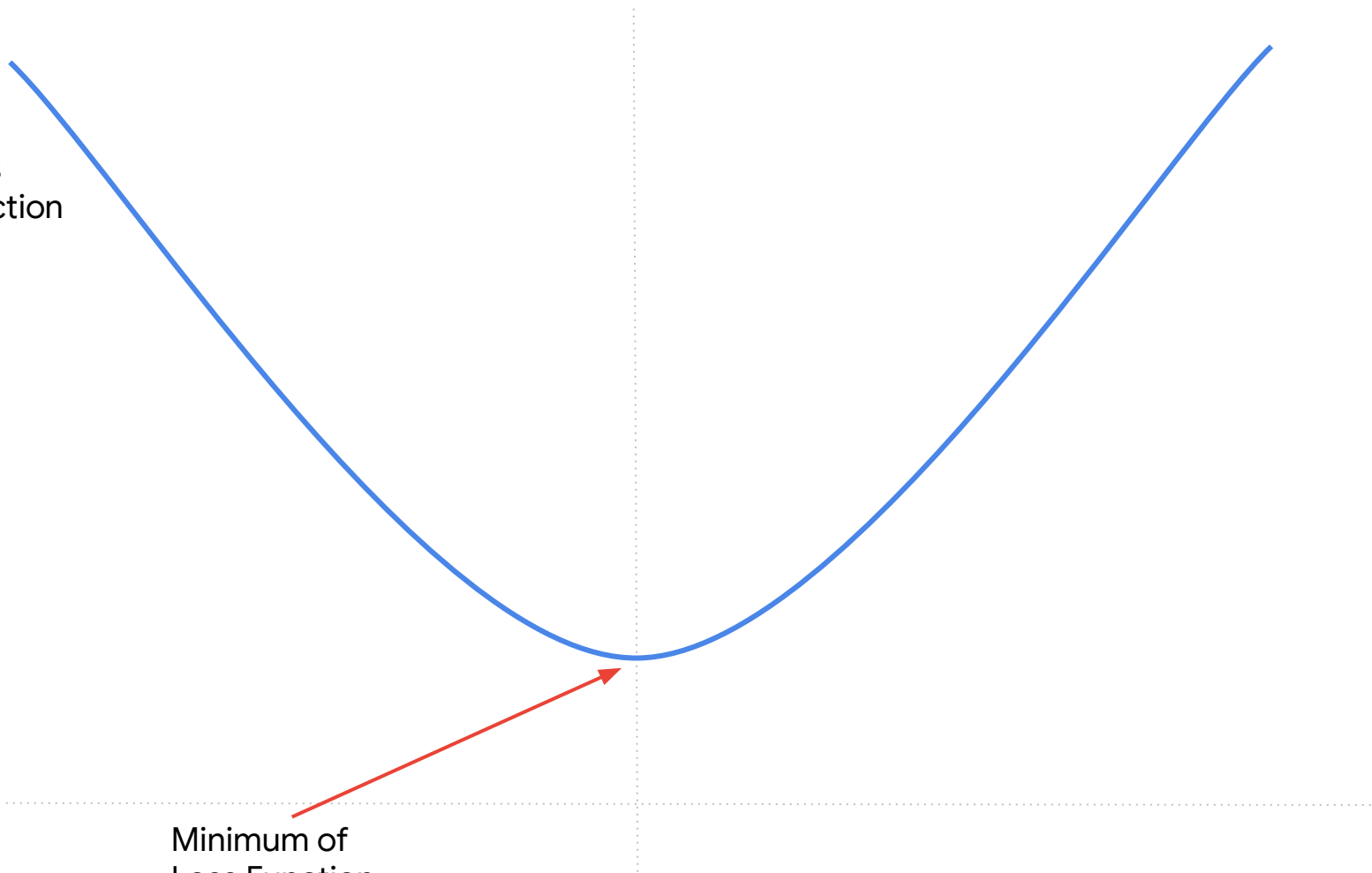
Laurence Moroney, Google

Loss  
Function



Loss  
Function

Minimum of  
Loss Function



Loss  
Function



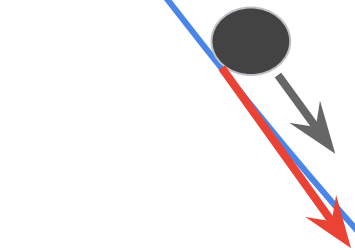
Loss  
Function

Gradient of  
value



Loss  
Function

Move in Direction of Gradient  
Learning Rate is size of the step to take



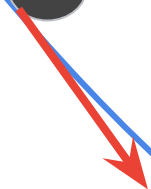
Loss  
Function

End up here



Loss  
Function

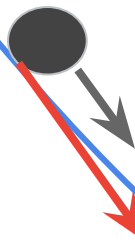
Get the  
gradient





Loss  
Function

Move in Direction of Gradient

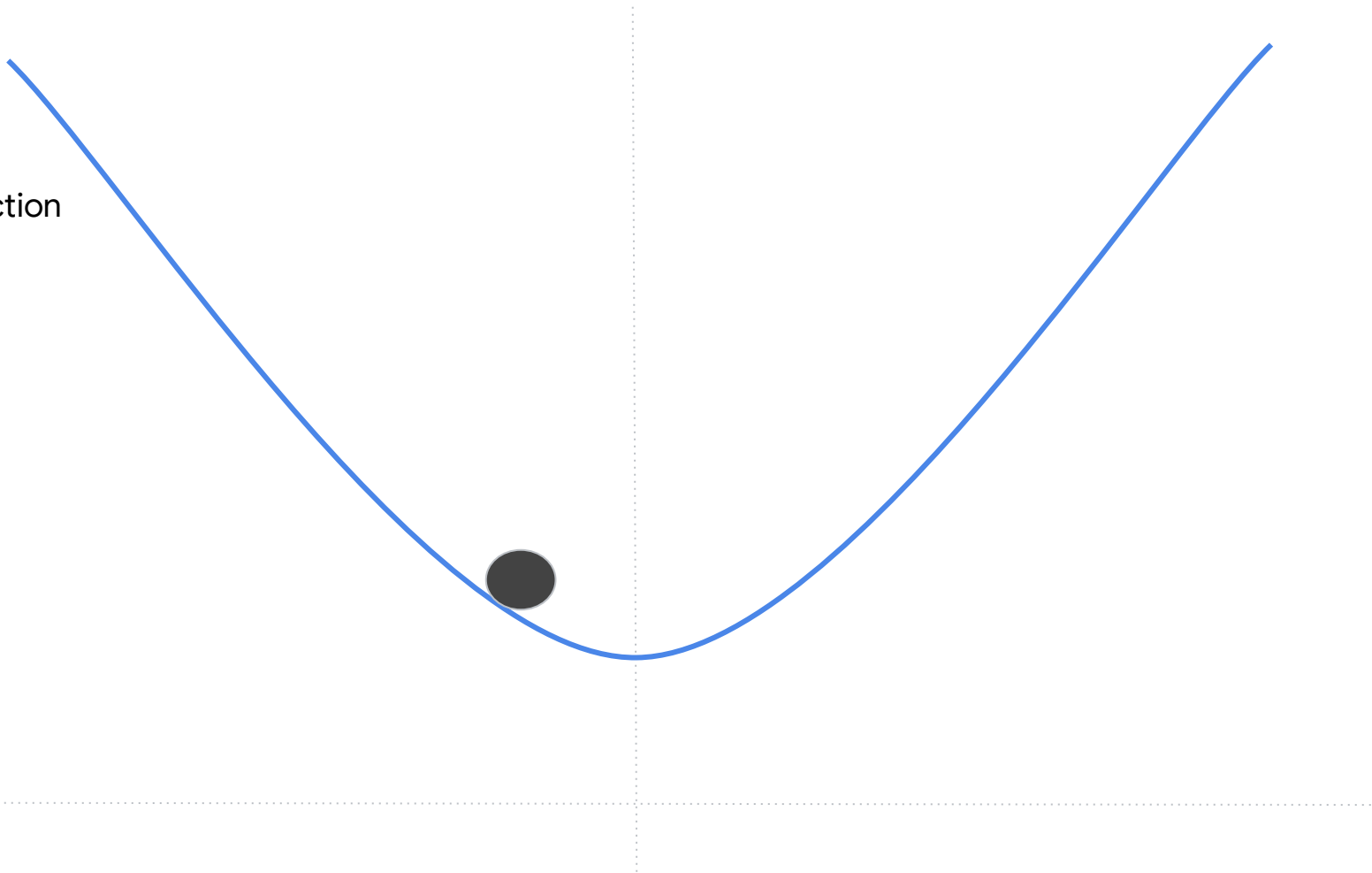


Loss  
Function

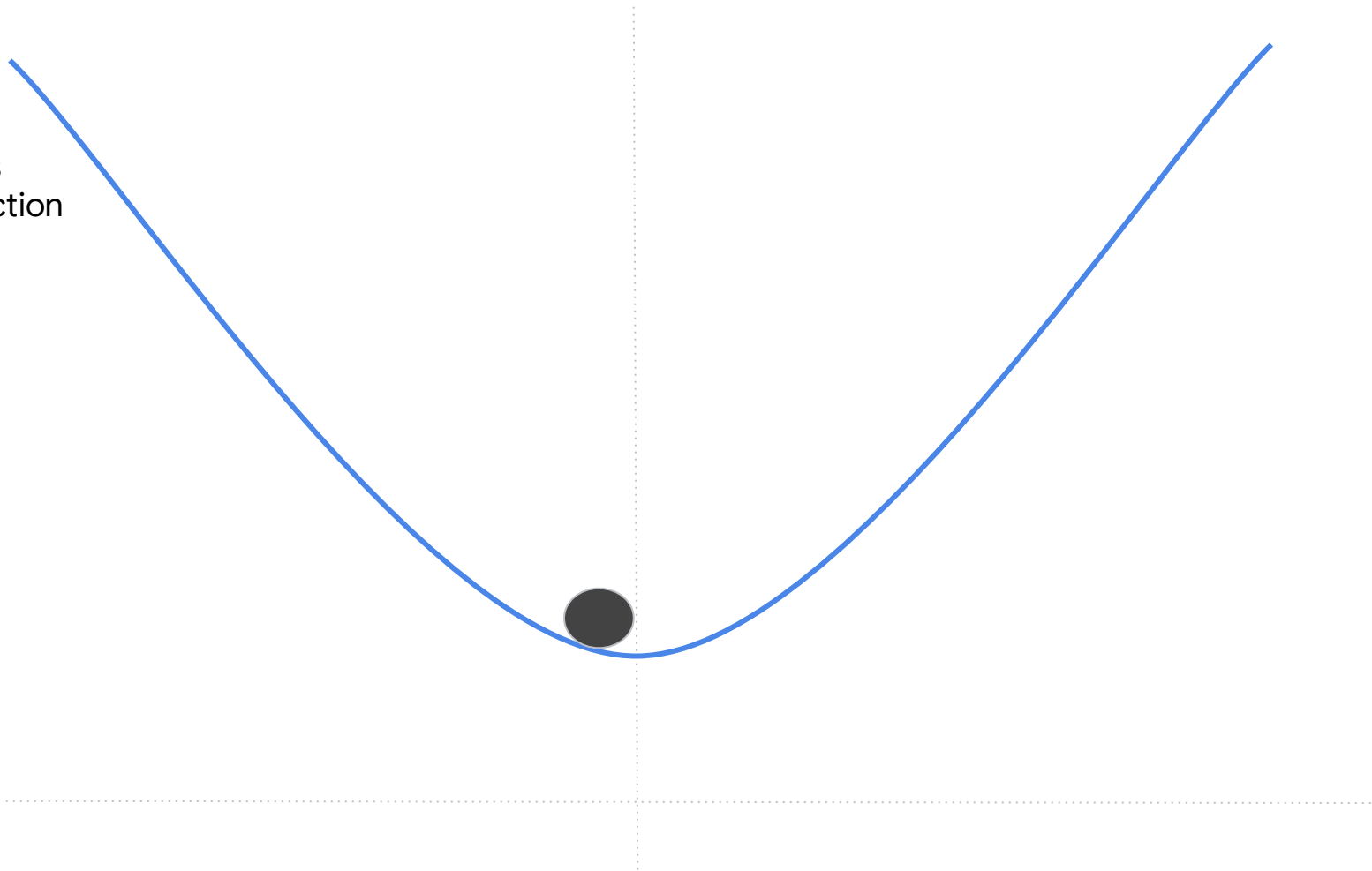
End Up here



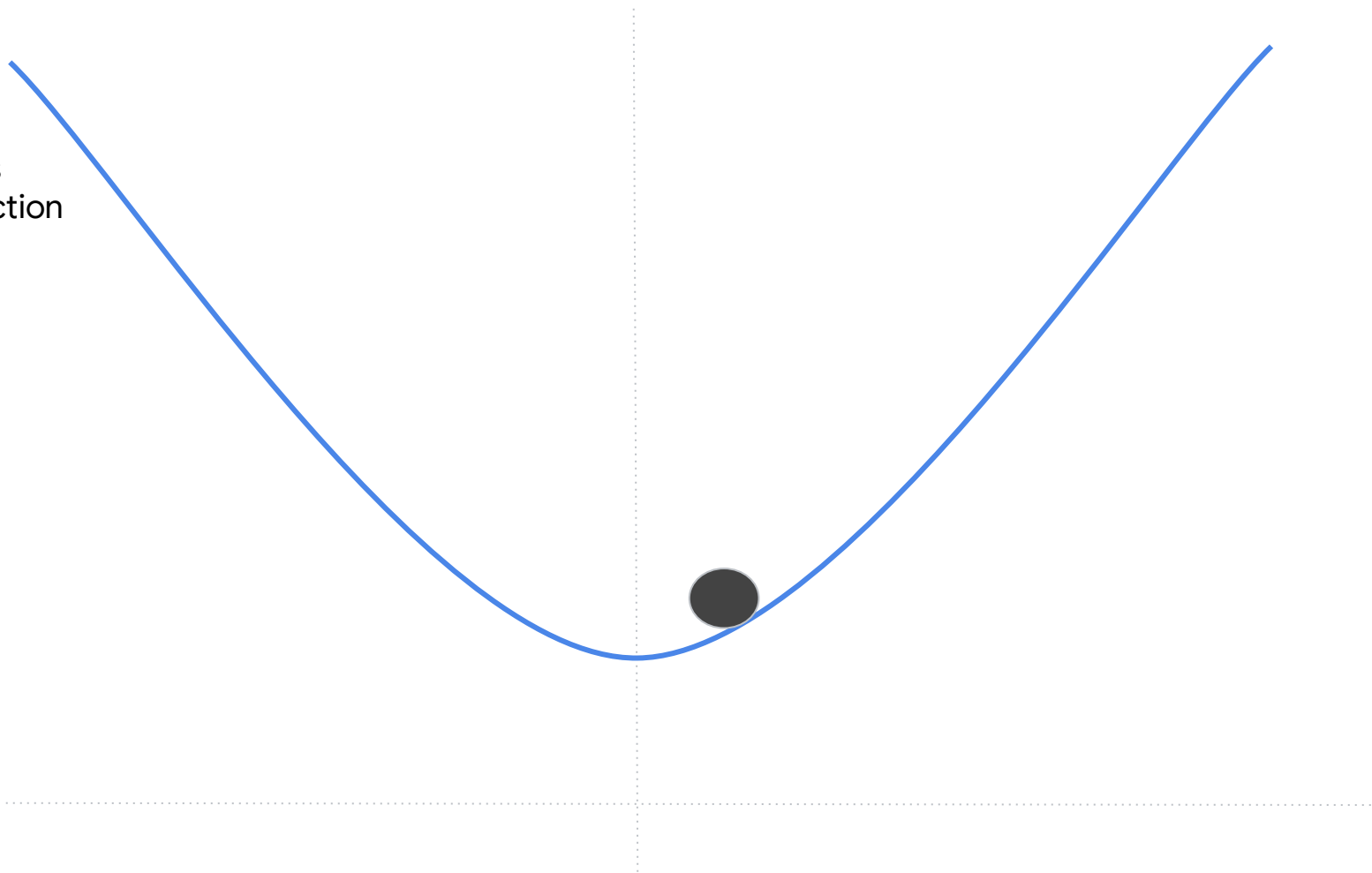
Loss  
Function



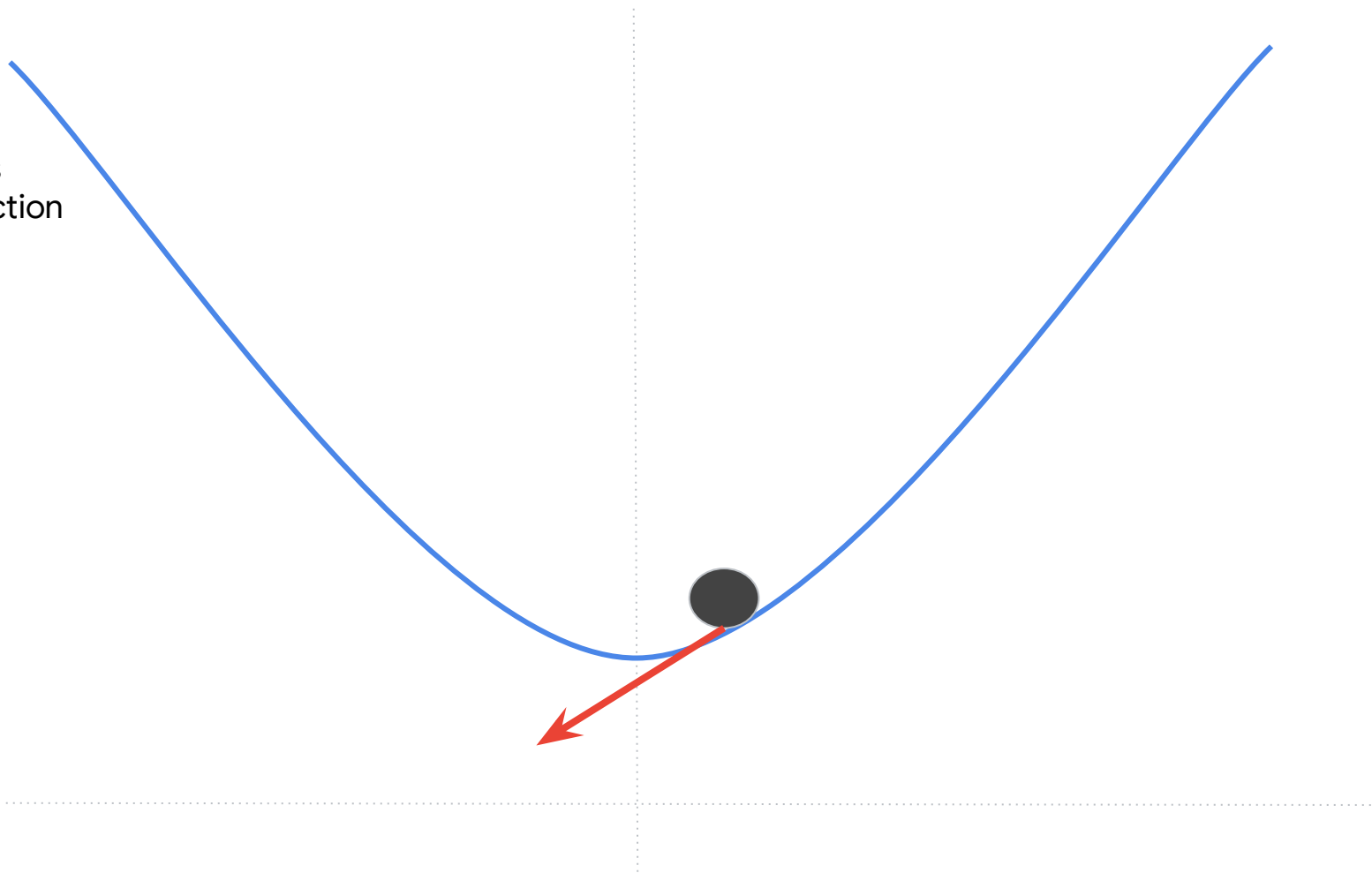
Loss  
Function



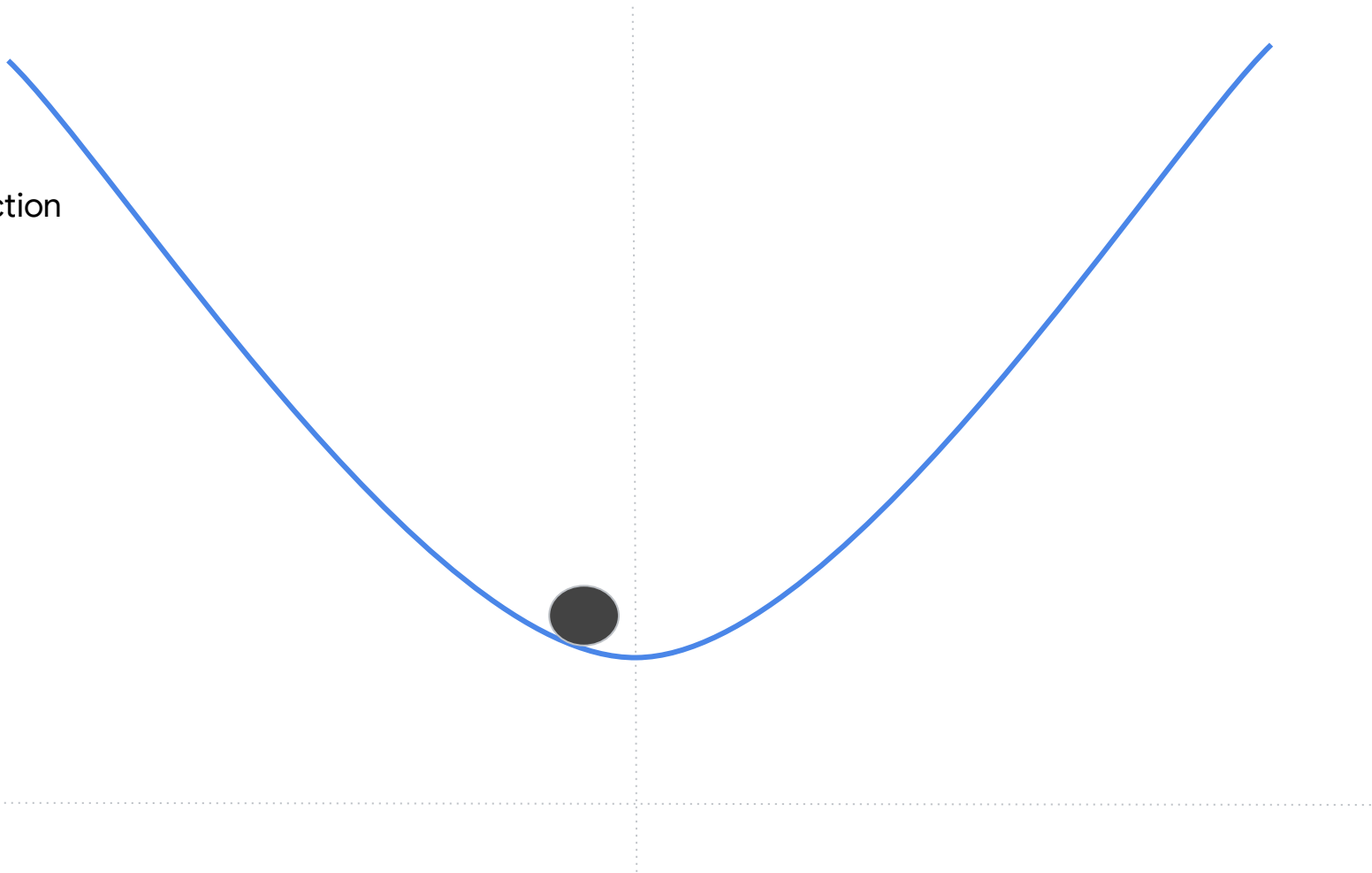
Loss  
Function



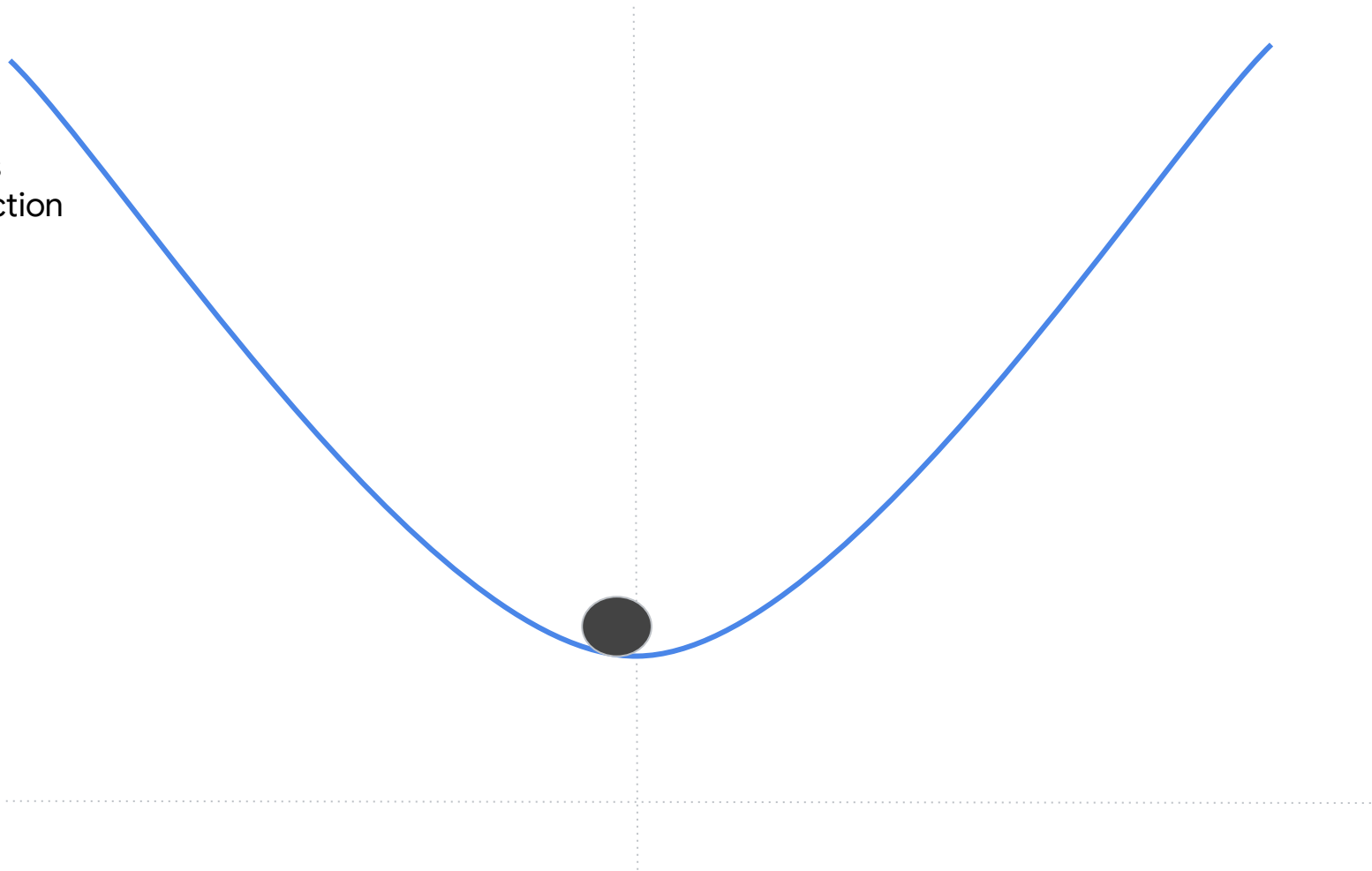
Loss  
Function



Loss  
Function

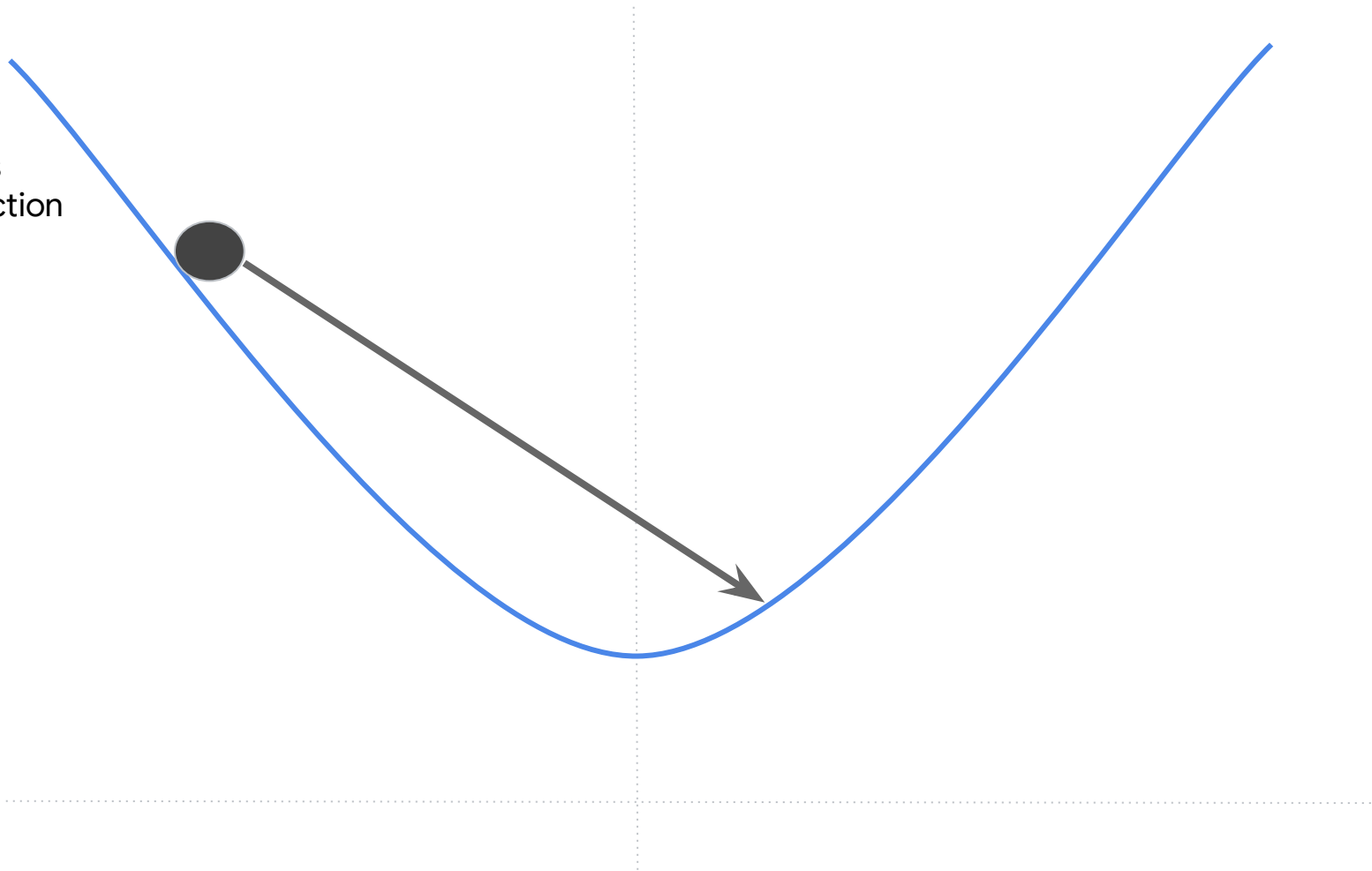


Loss  
Function

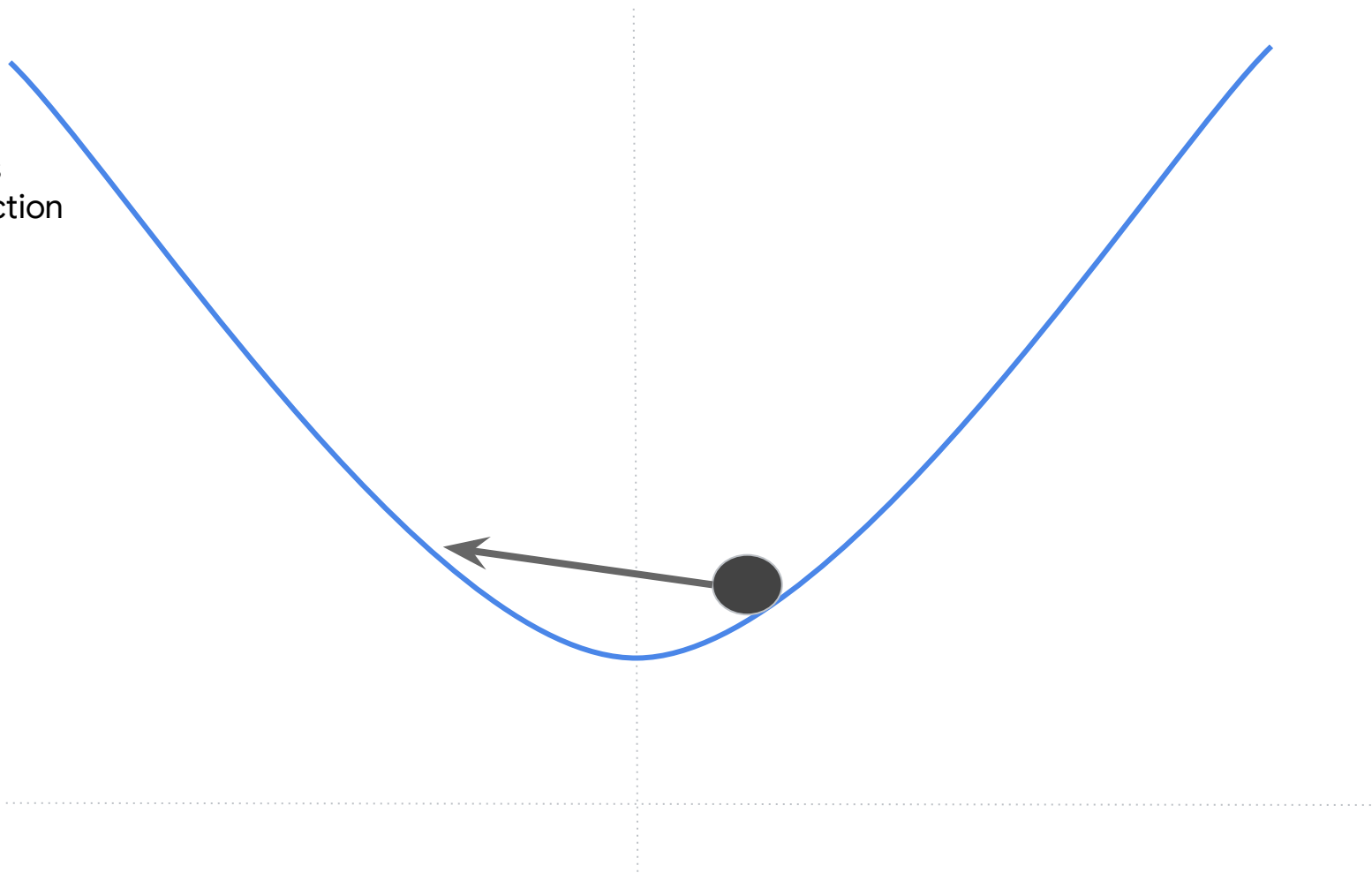




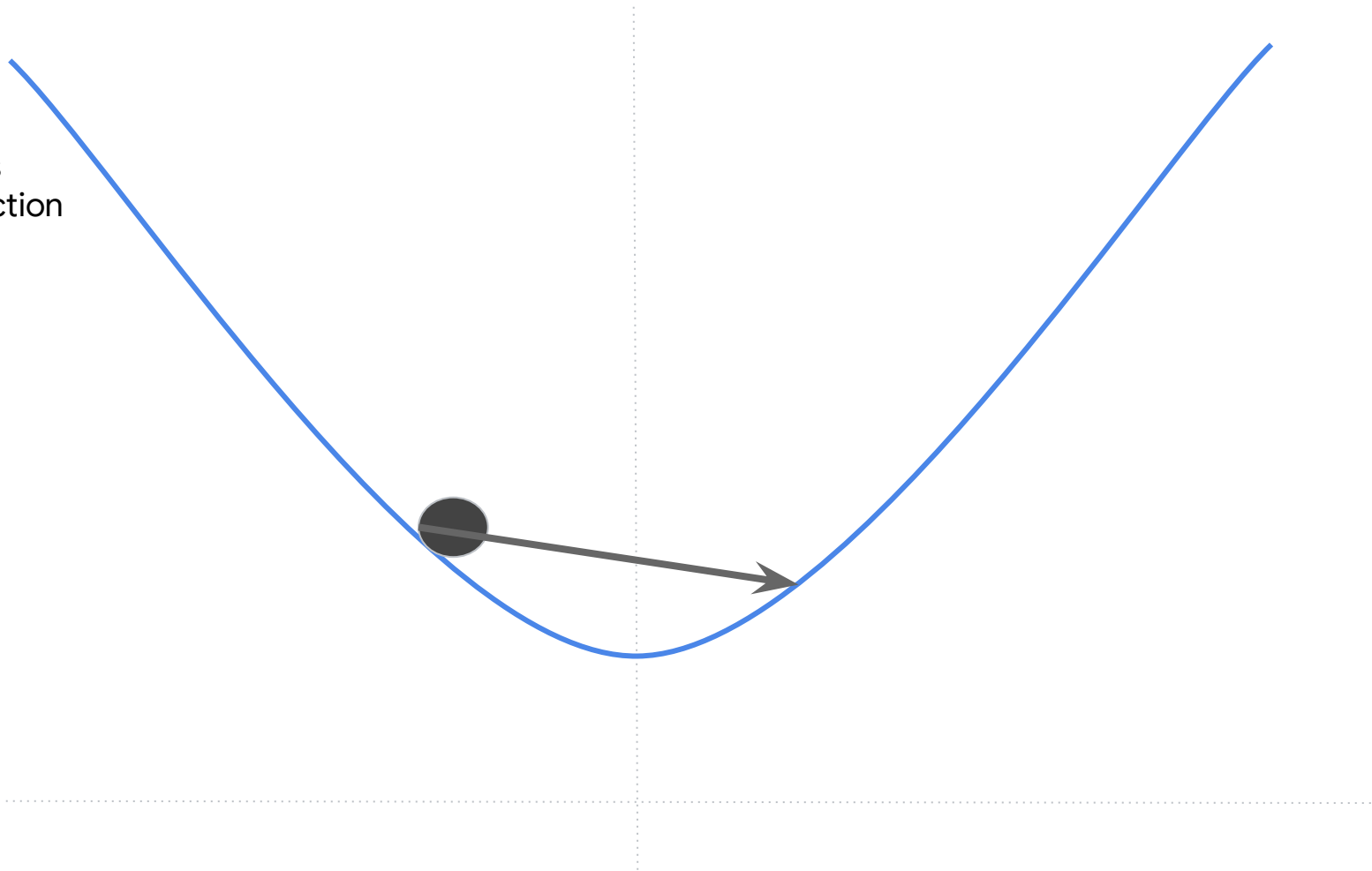
Loss  
Function



Loss  
Function



Loss  
Function



Loss  
Function

Move in Direction of Gradient



Loss  
Function

Move in Direction of Gradient



Loss  
Function

Move in Direction of Gradient



Loss  
Function

Move in Direction of Gradient



Loss  
Function

Move in Direction of Gradient







Your turn!