

- using **Plots**

investmentBy (generic function with 1 method)

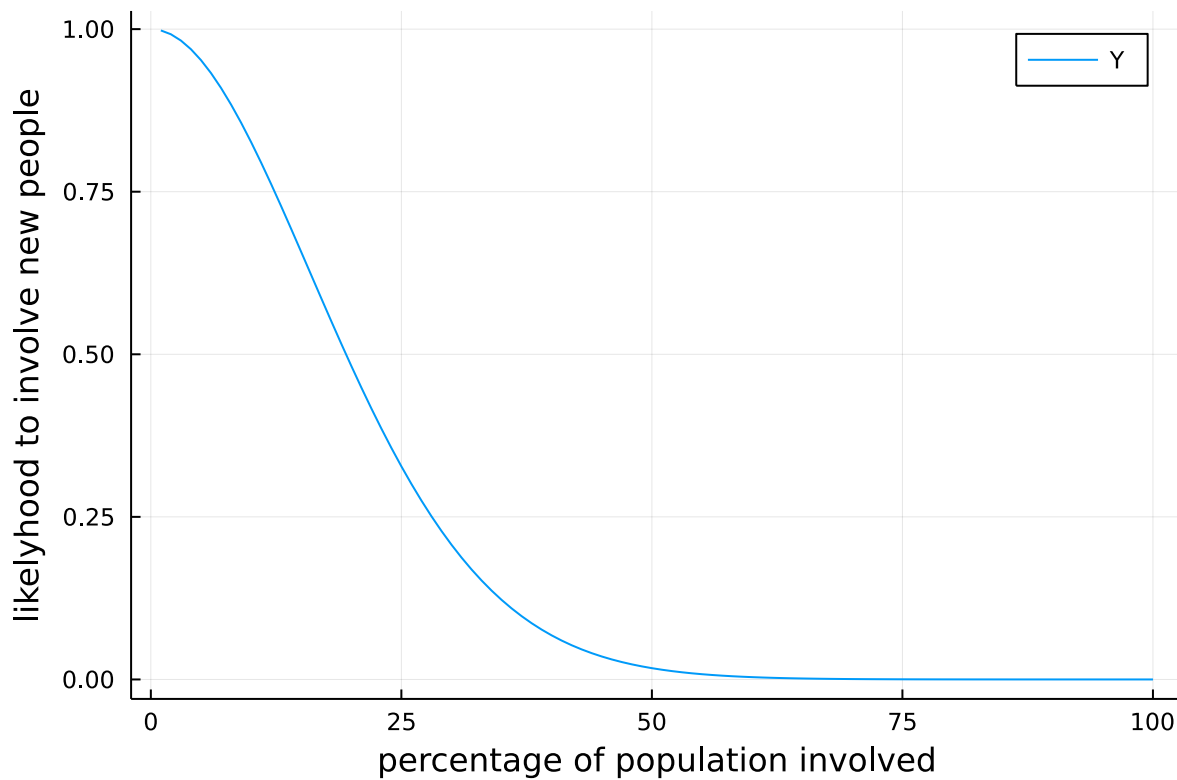
```
• function investmentBy(n)::Int64
•     money = 0
•     for i in 1:n
•         x = rand()
•         if x < 0.5
•             money += 300
•         elseif x < 0.7
•             money +=500
•         elseif x < 0.9
•             money +=1000
•         else
•             money +=2000
•         end
•     end
•     money
• end
```

likelyhood (generic function with 1 method)

```
• function likelyhood(n, pop)
•     1 / ((n/pop) + 1)^(n/5)
• end
```

[0.998012, 0.99211, 0.982421, 0.969111, 0.952381, 0.932466, 0.909626, 0.884142, 0.856313,

```
• begin
•     pop = 100
•     a = zeros(pop)
•     for i in 1:pop
•         a[i] = likelyhood(i, pop)
•     end
•     a
• end
```



```
• plot(1:100, a, label = "Y" , ylabel = "likelihood to involve new people", xlabel = "percentage of population involved")
```

```
[0.998012, 0.99211, 0.982421, 0.969111, 0.952381]
```

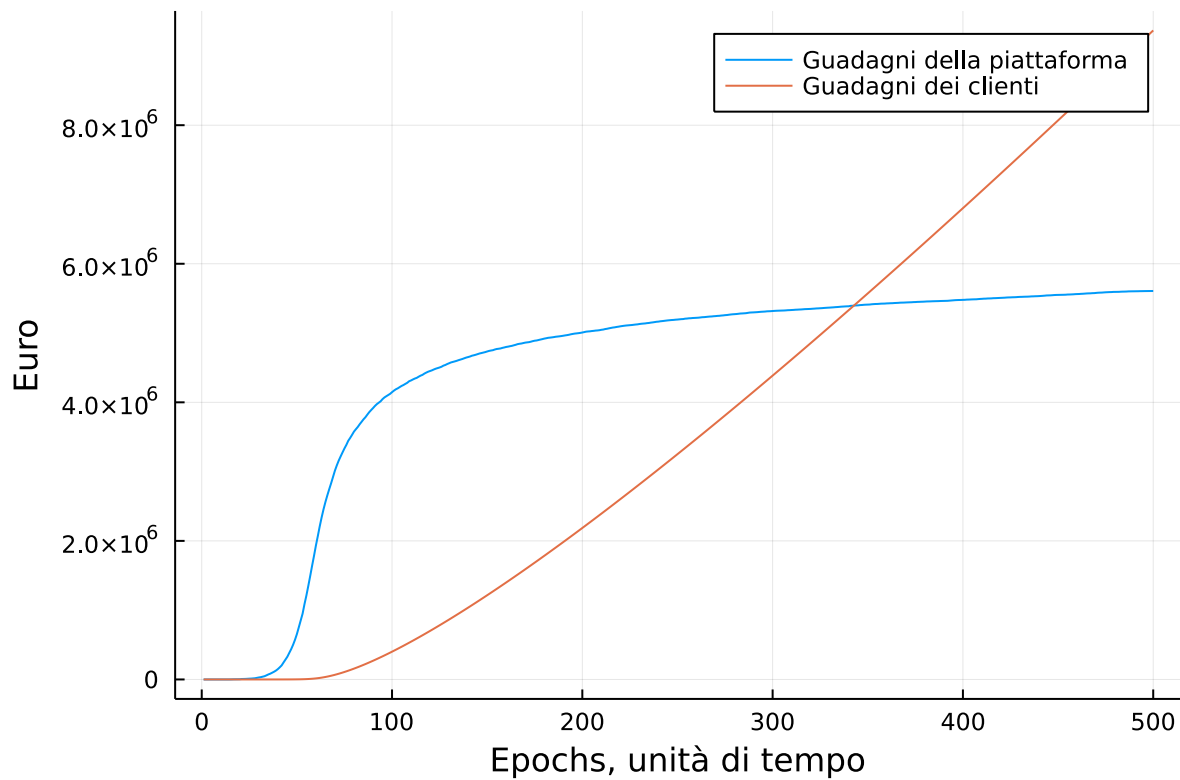
```
• a[1:5]
```

```
[3.08562e-6, 2.44728e-6, 1.93801e-6, 1.53237e-6, 1.20979e-6, 9.53674e-7]
```

```
• a[end-5:end]
```

HiperVerseValue (generic function with 1 method)

```
• function HiperVerseValue()
•     population = 60000000
•     conversionRate = 0.05
•     untrustRate = 0.2
•     starters = subscribers = involved = 1
•     reach = 3
•     subscriberPercentageGainDaily = lossesDaily = 0.005
•     subscriberPercentageReferralDaily = 0.000333
•     maxepochs = 500
•     gained = losses = 0
•
•     profit = zeros(maxepochs, 2)
•     for epoch in 1:maxepochs
•         epochReach = subscribers * reach * likelihood(involved, population)
•         newSubscribers = epochReach * conversionRate
•         newUntrust = epochReach * untrustRate
•         gained += investmentBy(newSubscribers)
•         lossesDaily += (newSubscribers * subscriberPercentageReferralDaily)
•         losses += subscribers * lossesDaily
•         involved += (newSubscribers + newUntrust)
•         subscribers += newSubscribers
•
•         profit[epoch,1] = gained
•         profit[epoch, 2] = losses
•     end
•     profit
• end
```



```
• begin
•   p = HiperVerseValue()
•   plot((1:size(p)[1]), p[:,1], label = "Guadagni della piattaforma", ylabel =
      "Euro", xlabel = "Epochs, unità di tempo")
•   plot!((1:size(p)[1]), p[:,2], label = "Guadagni dei clienti")
• end
```