

# Machine Learning

rick y rick

Part 1

Series Copyright © 2020 by OpenTask Publishing  
[www.MachineLearningBrickByBrick.com](http://www.MachineLearningBrickByBrick.com)



Forthcoming book  
Machine Learning Brick by Brick:  
Using LEGO® to Teach Concepts, Algorithms, and Data Structures  
(ISBN: 978-1912636105)

[www.MachineLearningBrickByBrick.com/LegoML-Part1.pdf](http://www.MachineLearningBrickByBrick.com/LegoML-Part1.pdf)



# Binary numbers



1

10

11

100

101

110

111

1000

1001



Decimal numbers



0 2 3 4 5 6 7 8 9 1



# Floating point numbers



128.99507



## Floating point rounding



128.995





100110111111110

Bit string



# Bitmap



```
1001101111111101
0000100001111110
1111110111000000
0000000000000000
0000000011110000
1111000000011100
1101010101011001
0000000011100110
```





We build a box with a hole and ...



... put decimal numbers there.

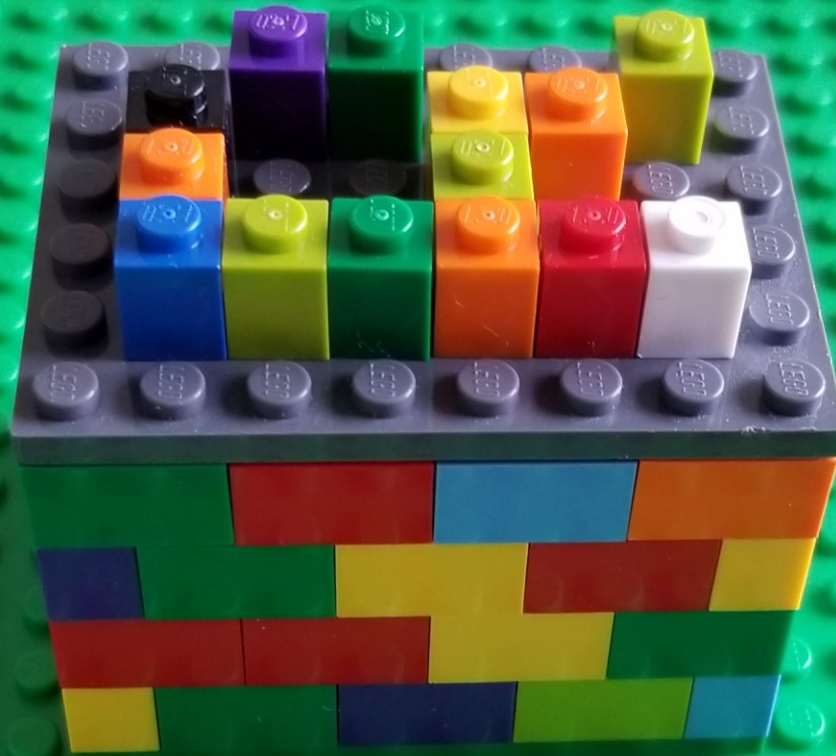






We close the box with a decorated panel where R means Random.





We built a random number generator...





We take out a digit after each toss and get the first number.





The second number also has 1 (black) as the last digit.  
Was it an anomaly?





The third number is different.



# Continued with Part 2