



► Pre-course Materials

► Topic 1: Course Overview

▼ Topic 2: Lossless Source Coding: Hamming Codes

2.1 Source Coding

Week 1 Quiz due Nov 02, 2015 at 15:30 UTC

2.2 Sequence of Yes/No Questions

Week 1 Quiz due Nov 02, 2015 at 15:30 UTC

2.3 Entropy of a Bit

Week 1 Quiz due Nov 02, 2015 at 15:30 UTC

2.4 Entropy of a Discrete Random Variable

Week 1 Quiz due Nov 02, 2015 at 15:30 UTC

2.5 Average Code Length

Week 1 Quiz due Nov 02, 2015 at 15:30 UTC

2.6 Huffman Code

Week 1 Quiz due Nov 02, 2015 at 15:30 UTC

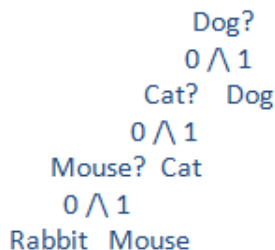
2.7 Lab 1 - Source Coding

Lab due Nov 02, 2015 at 15:30 UTC

► MATLAB download and

Suppose that I ask you to pick your favorite animal, which is either a cat, dog, mouse or rabbit. I am going to ask you a sequence of yes or no questions to try to figure out your favorite animal.

My guessing strategy is shown as the tree of yes/no questions shown below:



Assume that "X?" is shorthand for "Is it an X?", and that "X" is shorthand for "Your favorite animal is an X."

1 indicates which branch of the tree I will follow if you answer "Yes", and 0 indicates the branch if you answer "No".

2.2 QUIZ QUESTION 1 (1/1 point)

What is the sequence of 1/0 (yes/no) answers leading to the choice Dog?

Enter your answer below as a sequence of 1's and 0's with no spaces in between.

✓ Answer: 1

1

EXPLANATION

If you answer yes (1) to the first question, "Is it a dog?", then I know that you are thinking of a dog.

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*You have used 1 of 2 submissions***2.2 QUIZ QUESTION** (1/1 point)

What is the sequence of 1/0 (yes/no) answers leading to the choice Rabbit?

000

**Answer:** 000

000

EXPLANATION

You answer "no" to all questions "Dog?", "Cat?" and "Mouse?" It must be the Rabbit.

You have used 1 of 2 submissions

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