

I see we have an animal guessing game! I'll help you figure out the hidden animal by asking binary questions about its attributes. After each question, I'll show you my current belief distribution about what animals could still be the hidden one.

Let's start with the first question:

Is it a mammal?

Current belief distribution:

I need your answer first before I can calculate the belief distribution, as initially all 112 animals are equally likely.

SD Yes.

Great! The animal is a mammal. Let me calculate the current belief distribution.

Current belief distribution:

Based on the answer "Yes, it's a mammal," here are the possible animals:

Mammals (52 total):

- cat, dog, lion, elephant, whale, kangaroo, bat, giraffe, hippopotamus, rhino, tiger, bear, panda, cow, goat, horse, monkey, gorilla, zebra, mouse, otter, hedgehog, squirrel, chimpanzee, camel, wolf, fox, raccoon, sloth, koala, buffalo, deer, moose, platypus, echidna, armadillo, walrus, seal, porcupine, donkey, reindeer, lemur, dolphin, hamster, guinea_pig

Next question: Is it big?

SD No.

Excellent! The animal is not big. Let me update the belief distribution.

Current belief distribution:

Mammals that are not big (24 total):

- cat, dog, bat, mouse, otter, hedgehog, squirrel, chimpanzee, wolf, fox, raccoon, sloth, koala, monkey, platypus, echidna, armadillo, seal, lemur, dolphin, donkey, hamster, guinea_pig

Next question: Does it have fur?

SD Yes.

Perfect! The animal has fur. Let me update the belief distribution.

Current belief distribution:

Mammals that are not big AND have fur (21 total):

- cat, dog, bat, mouse, otter, hedgehog, squirrel, chimpanzee, wolf, fox, raccoon, sloth, koala, monkey, platypus, echidna, lemur, donkey, hamster, guinea_pig

Next question: Is it domestic?

SD No.

Got it! The animal is not domestic. Let me update the belief distribution.

Current belief distribution:

Non-big, furry mammals that are not domestic (15 total):

- bat, mouse, otter, hedgehog, squirrel, chimpanzee, wolf, fox, raccoon, sloth, koala, monkey, platypus, echidna, lemur

Next question: Can it fly?

SD No.

Great! The animal cannot fly, which eliminates bat.

Current belief distribution:

Non-big, furry, non-domestic mammals that cannot fly (14 total):

- mouse, otter, hedgehog, squirrel, chimpanzee, wolf, fox, raccoon, sloth, koala, monkey, platypus, echidna, lemur

Next question: Can it swim?

SD No.

Perfect! The animal cannot swim. Let me update the belief distribution.

Current belief distribution:

Non-big, furry, non-domestic mammals that cannot fly or swim (8 total):

- mouse, hedgehog, squirrel, fox, koala, monkey, echidna, lemur

Next question: Is it a carnivore?

SD No.

Great! The animal is not a carnivore. Let me update the belief distribution.

Current belief distribution:

Non-big, furry, non-domestic mammals that cannot fly or swim and are not carnivores (4 total):

- mouse, squirrel, koala, lemur

Next question: Is it an herbivore?

SD Yes.

Perfect! The animal is an herbivore. Let me update the belief distribution.

Current belief distribution:

Non-big, furry, non-domestic mammals that cannot fly or swim, are not carnivores, and are herbivores (1 animal):

- koala

Based on my analysis, I believe the hidden animal is a **koala**.

Let me verify by checking its attributes:

- mammal: ✓ Yes
- big: ✓ No
- has_fur: ✓ Yes
- domestic: ✓ No
- can_fly: ✓ No
- can_swim: ✓ No
- carnivore: ✓ No
- herbivore: ✓ Yes

Is the hidden animal a koala?

