

There are 3 ants sitting on three corners of a triangle. All ants randomly pick a direction and start moving along edge of the triangle. What is the probability that any two ants collide?

Hint: Every ant has two choices (pick either of two edges going through the corner on which ant is initially sitting).

Answer:

Collision doesn't happen only in following two cases

1) All ants move in counterclockwise direction.

antPuzzl1e2

2) All ants move in clockwise direction.

antPuzzl1e1

Since every ant has two choices (pick either of two edges going through the corner on which ant is initially sitting), there are total 23 possibilities.

Out of 23 possibilities, only 2 don't cause collision. So, the probability of collision is  $\frac{6}{8}$  and the probability of non-collision is  $\frac{2}{8}$ .

What is Overfitting, and How Can You Avoid It?

. What is 'training Set' and 'test Set' in a Machine Learning Model? How Much Data Will You Allocate for Your Training, Validation, and Test Sets?

How Do You Handle Missing or Corrupted Data in a Dataset?

How Can You Choose a Classifier Based on a Training Set Data Size?

Explain the Confusion Matrix with Respect to Machine Learning Algorithms.

What Is a False Positive and False Negative and How Are They Significant?

What Are the Three Stages of Building a Model in Machine Learning?

What Are the Applications of Supervised Machine Learning in Modern Businesses?

What is Semi-supervised Machine Learning?

What Are Unsupervised Machine Learning Techniques?

What is the Difference Between Supervised and Unsupervised Machine Learning?

What is the Difference Between Inductive Machine Learning and Deductive Machine Learning?

compare K-means and KNN Algorithms.

What Is 'naive' in the Naive Bayes Classifier?

Explain How a System Can Play a Game of Chess Using Reinforcement Learning.

how Will You Know Which Machine Learning Algorithm to Choose for Your Classification Problem?