Bitcoin and GA

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What is Bitcoin ?

Bitcoin is a decentralized digital currency that allows for peer-to-peer transactions without the need for intermediaries such as banks. It was created in 2009 by an unknown individual or group using the pseudonym Satoshi Nakamoto. Bitcoin transactions are verified by network nodes through cryptography and recorded in a public ledger called a blockchain. Bitcoin has a limited supply, with a maximum of 21 million coins that can be mined. It is also known for its volatility, with prices fluctuating widely over short periods of time. Bitcoin has sparked interest in the world of finance and technology due to its innovative approach to currency and transactions.

Regression Problem

In machine learning, regression is a type of problem where the goal is to predict a continuous output variable based on one or more input variables. The input variables are also called features or independent variables, while the output variable is also called the dependent variable.

The regression problem can be classified into two types: simple linear regression and multiple linear regression.

In simple linear regression, there is only one input variable, and the goal is to fit a straight line to the data that best describes the relationship between the input variable and the output variable. The equation of the line is given by:
$y = mx + b$
where y is the output variable, x is the input variable, m is the slope of the line, and b is the y-intercept.

In multiple linear regression, there are multiple input variables, and the goal is to fit a hyperplane to the data that best describes the relationship between the input variables and the output variable. The equation of the hyperplane is given by:
$y = b0 + b1 * x1 + b2 * x2 + ... + bn * xn$
where y is the output variable, x1, x2, ..., xn are the input variables, and b0, b1, b2, ..., bn are the coefficients of the hyperplane.

Regression problems are commonly used in various fields, such as finance, economics, engineering, and social sciences, to make predictions and estimate relationships between variables. Examples of regression applications include stock price prediction, housing price prediction, and customer churn prediction.

Problem

Here we are going to solve a regressino problem using Genetic algorithm .in each row of the dataset you can see 11 numbers that indicates the price of bitcoin in 11 minutes.we want to estimate the 11 th price using first 10 numbers.in this problem we have 11 variable . calculate them by GA .