



Genetic Algorithm

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[AIC summer project](#)

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Overview

We provide you with incomplete code that contains loading the dataset, preprocessing, and fitting a linear regression model to it. Then, we ask you to complete the code for the genetic algorithm and compare the results with linear regression results.

Dataset Description

The dataset contains 3 features and 9435 records. We use 2 features here which are:

inp_feature = "USDJPY"

out_feature = "USDGBP"

The remaining feature is "Date", we've used this feature for filtering our data.

These are **two different currencies** that have some correlation. (Increasing one of them can cause some changes to the other.)

In this project, we want to **model** these two features and find **how** they are correlated.

Goals

1. Complete the code for the genetic algorithm and fit it to the described dataset.
2. See the results and compare them with Linear Regression results.
3. Make your result better by changing some parameters and functions.

Specifications

1. Notice that this is a project for learning the concepts (which you learned in our classes) better, so don't cheat, and don't use ChatGPT and other related AI tools. Just try to do it on your own. If you need help, feel free to ask.
2. Using **Python libraries** for the genetic algorithm is **not allowed**. Try to implement it by completing the code below.
3. We suggest you use this code and **complete** the **important parts** which are your **exercises**, but you can implement the genetic algorithm completely on your own if you want.

We hope you find this a rewarding challenge. Happy coding! 😊