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**Particle Swarm Optimization(PSO).**

**Project Description:**

* This project will look in to following:
* What is PSO?
* Where did it come from (inspiration)?
* What are its applications in computational world?
* How does this algorithm works/ functions?
* Why computer and data scientists prefer such algorithms (efficiency)?
* Particle Swarm Optimization (PSO):
  + A technique in artificial intelligence to solve a numerical optimization problem.
  + Basically, goal is to minimize error terms (difference between actual answer and predicted answer).
  + Based on metaheuristic ( a higher level procedure used to find optimal solution for any optimization problem with imperfect data or limited computation capacity)
  + Initial example is of predicting score of a football team using a math equation.
* Inspiration of PSO:
* Function of Pso
* Structure of our project
* Data Structures

**Project Outcome:**

* Its efficiency (Why project scientists are preferring such algorithms)
* What we can find from its code?
* Applications of it in computational field

1. Heart Disease Prediction System: Heart disease diagnosing is difficult and important task in order to get patients exact condition with respect to other diseases linked to the heart (chest pains, heart attacks). Earlier, using the traditional method/technique to predict such diseases, were inefficient and inaccurate. Binary PSO divides the working of the system in two parts i.e. prediction model and performance model. The accuracy and efficiency of BPSO is proved to be better than the early traditional methods.

**Libraries/Resources to be used:**

**Python library.**