	-ab-I
	Genetic algorithm for optimization day
	etal out by & () asked called to
	impost earland in the site time
	impost numpy agarp italian olution
	and the state of t
	def fitness function (12) ill modes its and
	(mitigative month 2) stress = mitologic
	population size = 10 mg
	generations = 50 I made
	mutation rate = 10-1 manga = market too
42.10	corrores rate = 10.81 = 1 which is the
RENTE	tess : I mithier I miliable of Al due
esti ista	def create population (singe):
ha - 1 1	ectuer op eardon wriforn (-10, 10, size)
	(s) in sangle population sine (2):
wad A	def evoluate fitness (population):
	seturn np array ([fitness function (ind) for ind is
	(1 hiery (hay) same population D.
-	def select-parents (population, fitness):
	total fitness = np. sun (fitness)
1.	selection people = fitness 1 total bitness
	setuen population Enp. sondom. shake (la (population)
	size = 2, p = relection_veroes)
tont !	dels exoreover (porent 2)
	if eardom, random () Kicrosi-rate:
	alpha = sandom, sandom ()
Un	child = alpha * parent 1 + (1; alpha) * parent 2
(itzur	3 de seturch child site de 187 Filting
	return parents



def nutate (child): mutation point = Random. willown ectuen mutation point return child geretin_algorithm (): sopulation = create population (popula generation is earge (generations) fitzer = evaluate fitzers (population best fitness = np.mase (fitness) best individual = population (np. algmax(fitres)) sirt (f "E, everation & gereration ?: Best Fitzer [best fitness? Rest Individual = I best - individual new population = C.I. for _ in songe (population_ posent 2 = select pasents (population filmer) child 1 = crossover (pasent 2, pasent 2) child 2 = crossoves (pasent 2, yalent 1) hild 1 - millate (child!) shild 2 = metate (child 2): new population exterid (Child 1; child 2 population = np, array (new, population evaluate fitness (popul individual = population Cap, algoris (final-fitres exture best individual openas [fina Pertisdution, best fitness = generale_algorithm print (f'rest solution? Expert solution } with Fitness)

	Postiele Suele Optioner
	output:
	Begt-solution: -9.925 with Fitness: 98.5122 at herestion: 31
Jacob	your (a) still method (a) and method (a)
1	mAlgorithm! when my ting mahroz maries
	Step 1: - Identify the objective for to optimize in this
	case maximize $f(x) = \chi^2$
	Stopper Pardally initealing Sunsa pulation.
	Step 2: - Set the foll parameters population eigh, mutation
	sale reserves enter la
	rate, crossover sate no of generation lower bound
	CANADA AND AND AND AND AND AND AND AND AN
	Step 3: - t. A star side side (1)
1	Step 3:- Generate a initial perpopulation within the sange
	of -10, to 10, was stranged (5)
1	Stept :- For each inchinidual in population compute fitness
- 1011	ucing fitness fruction f(x) = x2
	Step 5: - Use Paulette wheel relection to relect two
ting of	prevents from the population
, Xe	Step 6: For the selected parents, perform reasones with
	a probability of 0.8.
der in	Step 7 - For teach offspeing apply mutation with a
4.8000	probability of 0.8 miting 1. (5)
5	tep8: - Collect the newly created offspeing intil the
	new population reaches the original population ringe
	with a mailtirey of ill make the
	Step 9: - Replace old population: with new generation of
	individuals in the same
1 km	dilang sill for Wadamer Ababyl (b)
	그 그 그 그 그 그 사람들이 없는 것이 되었다. 그 그는 그를 살아왔다면 하는 것이 없는 것이 없다고 있다. 그 없는 것이 없는 것이 없는 것이 없는 것이 없는 것이 없는 것이다.
	tap 10:- After final generation avaluate fitness of the
74 1	populationiles at almost our fi
11	