파이썬 osqp

(ADMM) 기반

conda install -c conda-forge osqp

Matrix P should be symmetric and positive semidefinite. The matrix you create is neither symmetric nor PSD.

https://osqp.org/docs/examples/setup-and-solve.html

1. 10\*10 ValueError: Workspace allocation error! (똑같은 variablen mit cvxopt)

import time

import osqp

import numpy as np

from scipy import sparse

start = time.time()

Matrix10 = np.load(r'C:\Users\skqkr\Desktop\Semesterarbeit/Chiwan\_Q1.npz')

# Define problem data

P = sparse.csc\_matrix(Matrix10['Q']) ## CSR(Compressed Sparse Row) für die Speichereffizienz

q = Matrix10['p']

A = sparse.csc\_matrix(Matrix10['G'])

u = Matrix10['h'] ## Rechte Seite von der Ungleichung

# Create an OSQP object

prob = osqp.OSQP()

# Setup workspace and change alpha parameter

prob.setup(P, q, A, u, alpha=1.0)

# Solve problem

res = prob.solve()

print ("time :", time.time() - start)

https://stackoverflow.com/questions/619335/a-simple-algorithm-for-generating-positive-semidefinite-matrices