

KMeans_Animation-Copy1

September 2, 2021

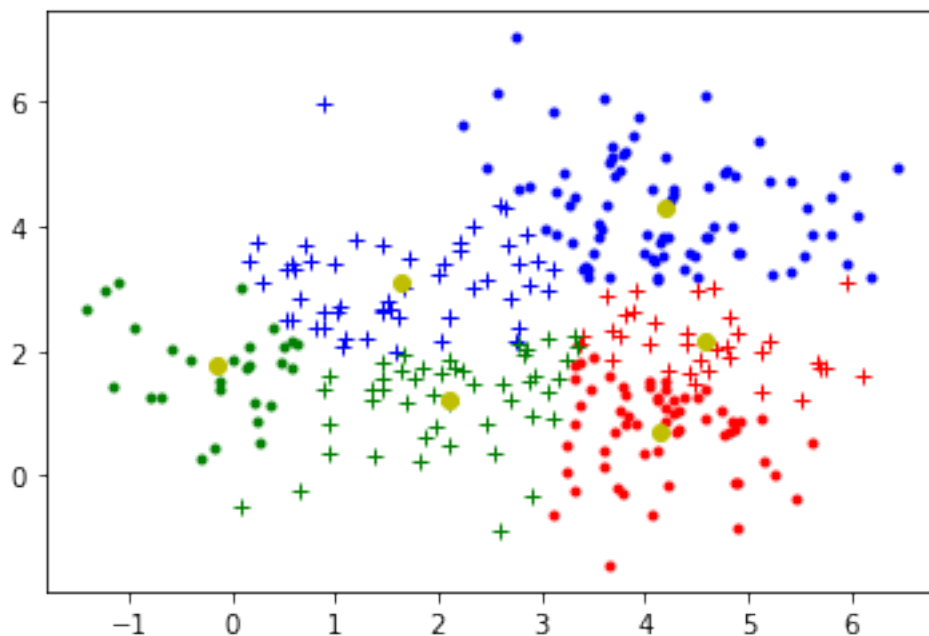
0.0.1 KMeans Animation : Plots to show convergence of cluster centers

Importing required libraries import numpy as np
import time
import matplotlib.pyplot as plt
from scipy.sparse import csc_matrix, find
from itertools import combinations
import copy

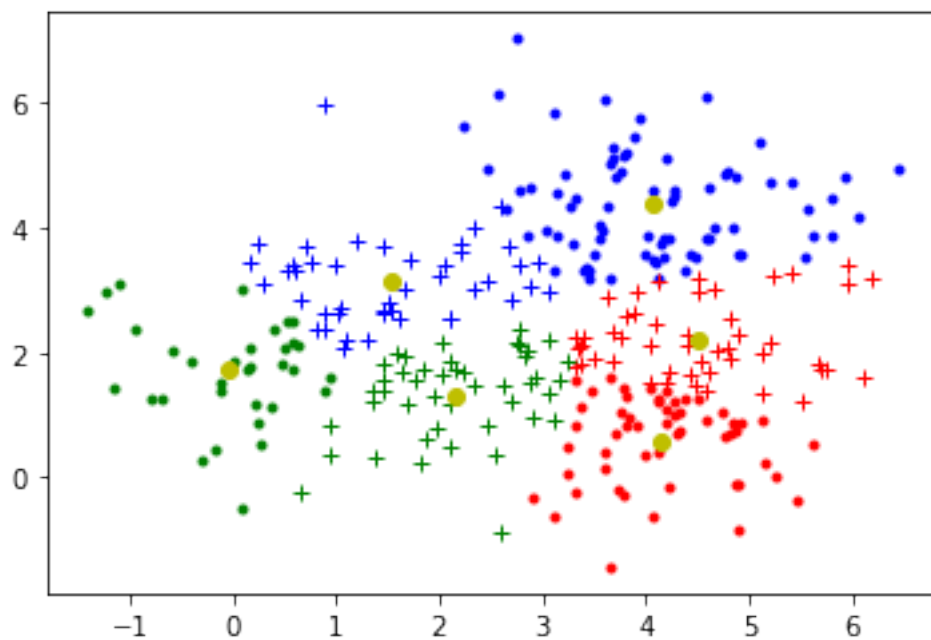
Implementing KMeans algorithm from scratch Source code will be provided upon request

Observing the convergence of algorithm as it iterates through different cluster centers

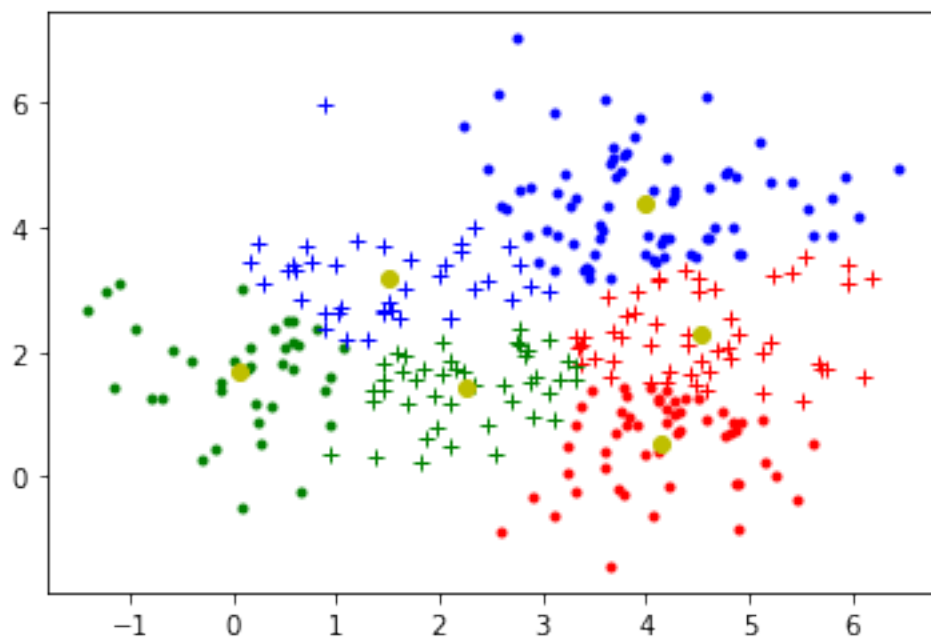
--iteration 1



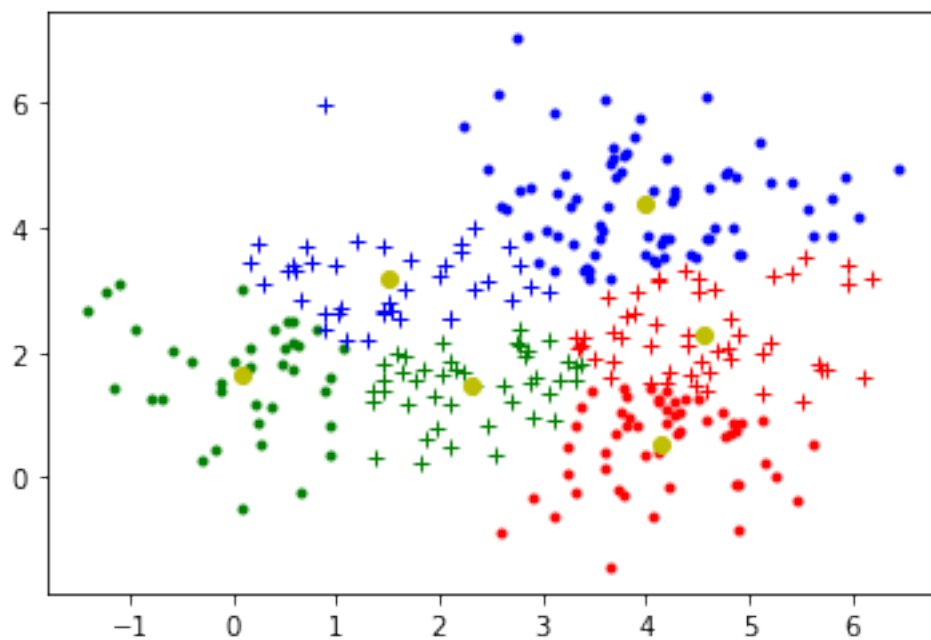
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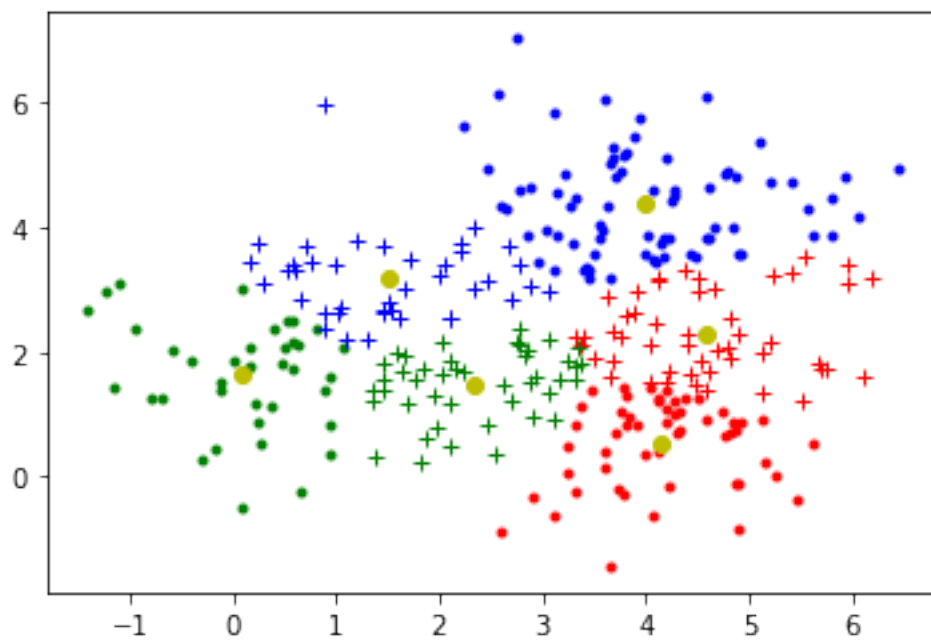
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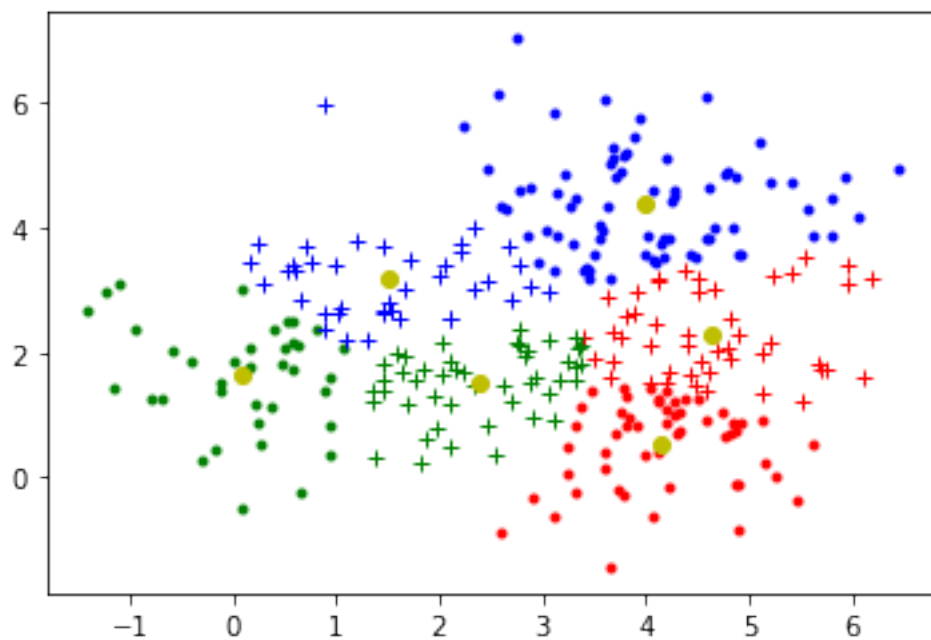
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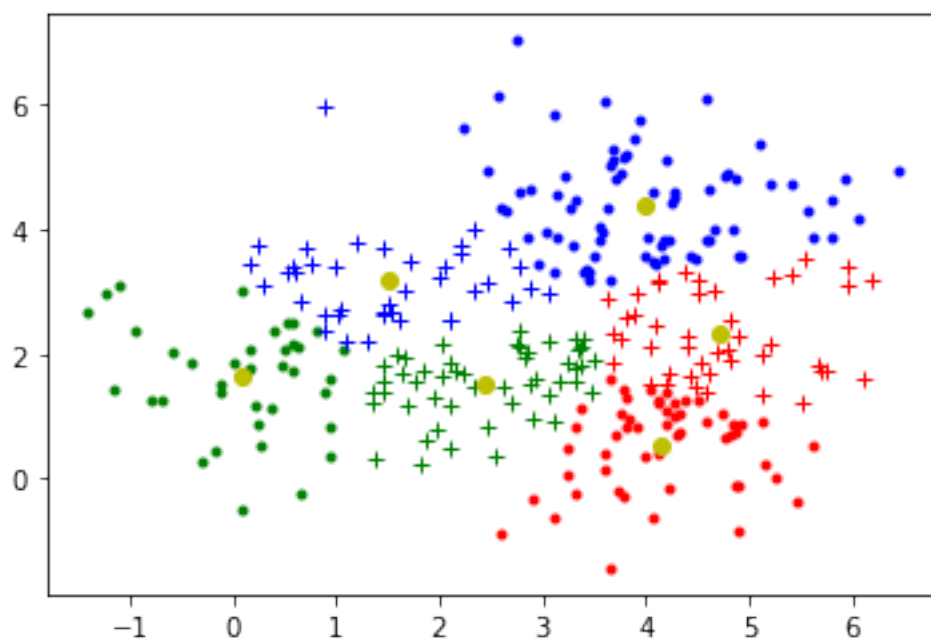
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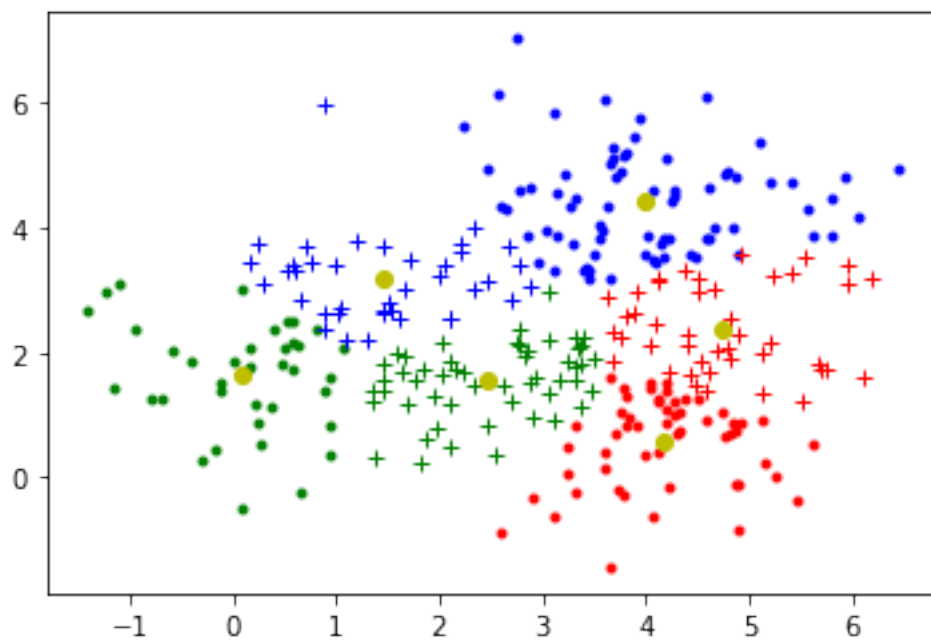
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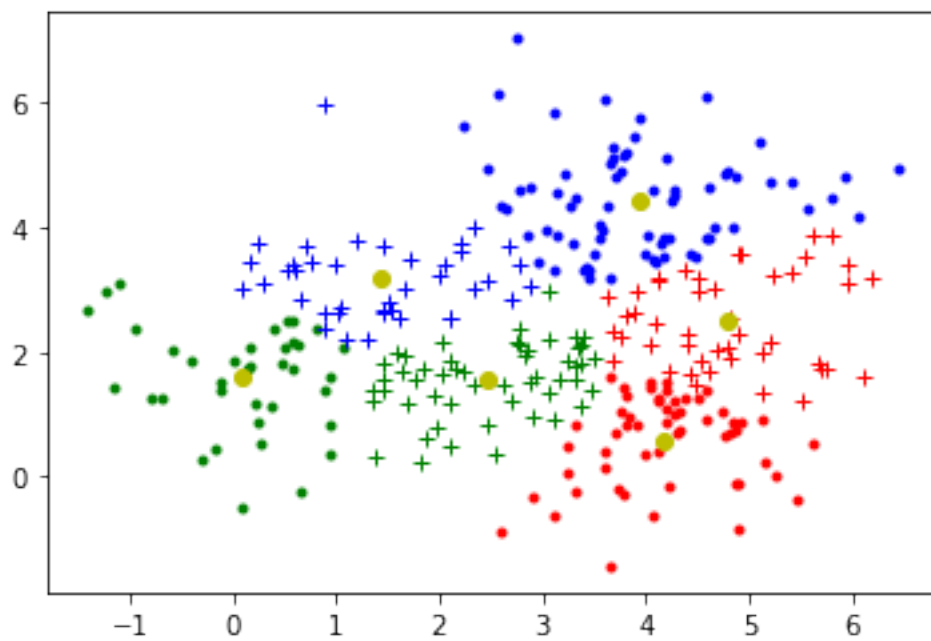
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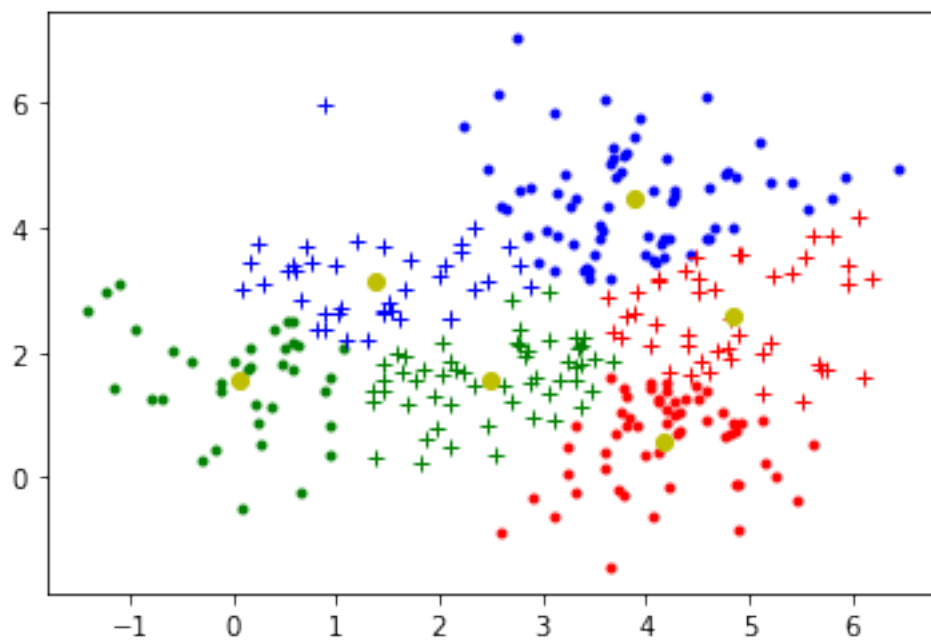
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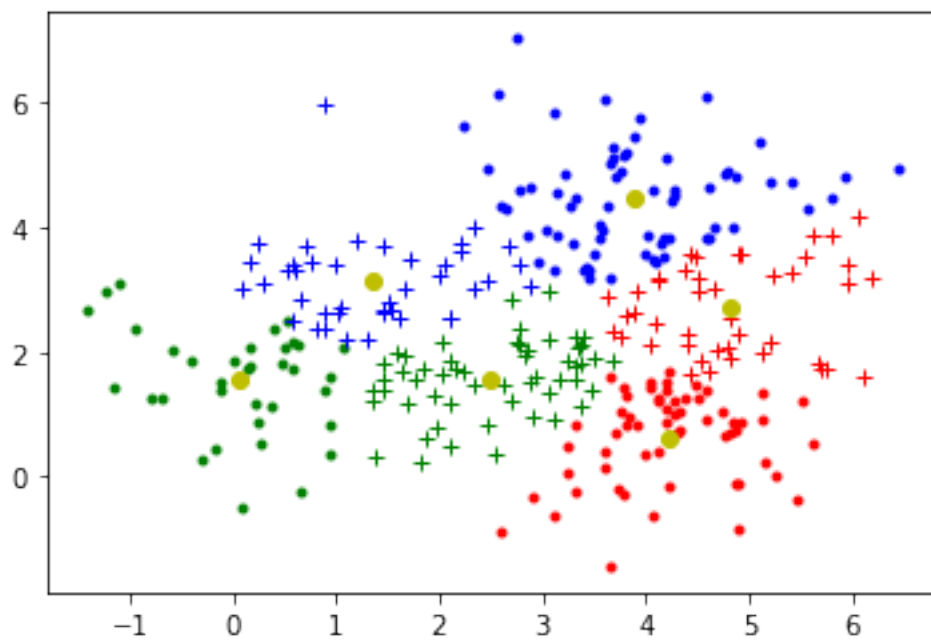
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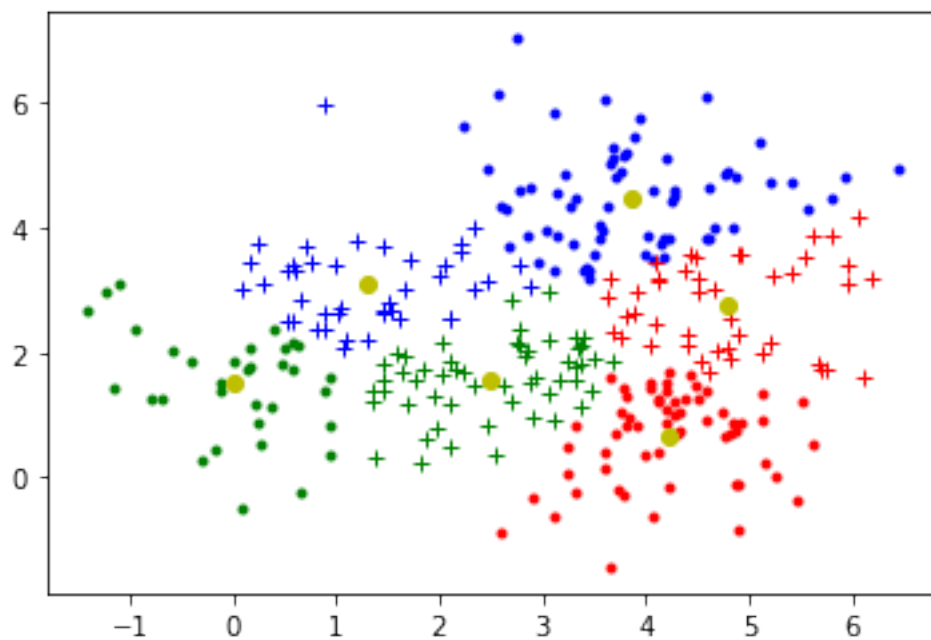
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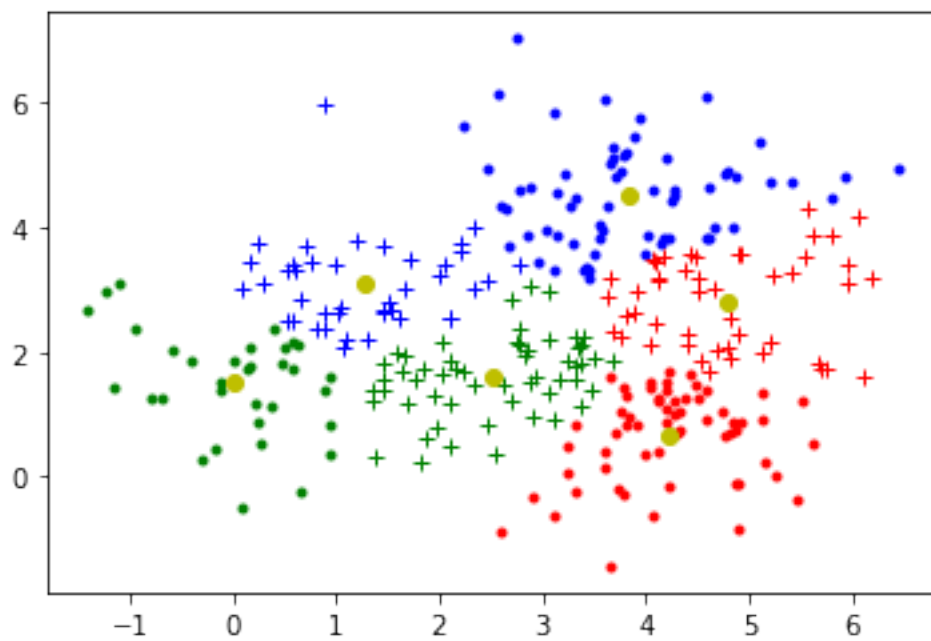
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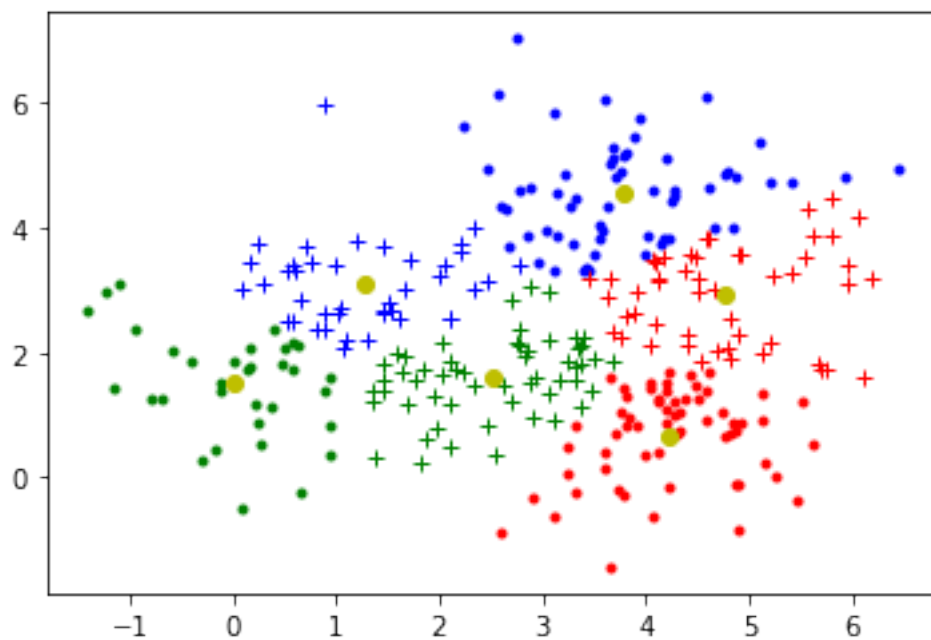
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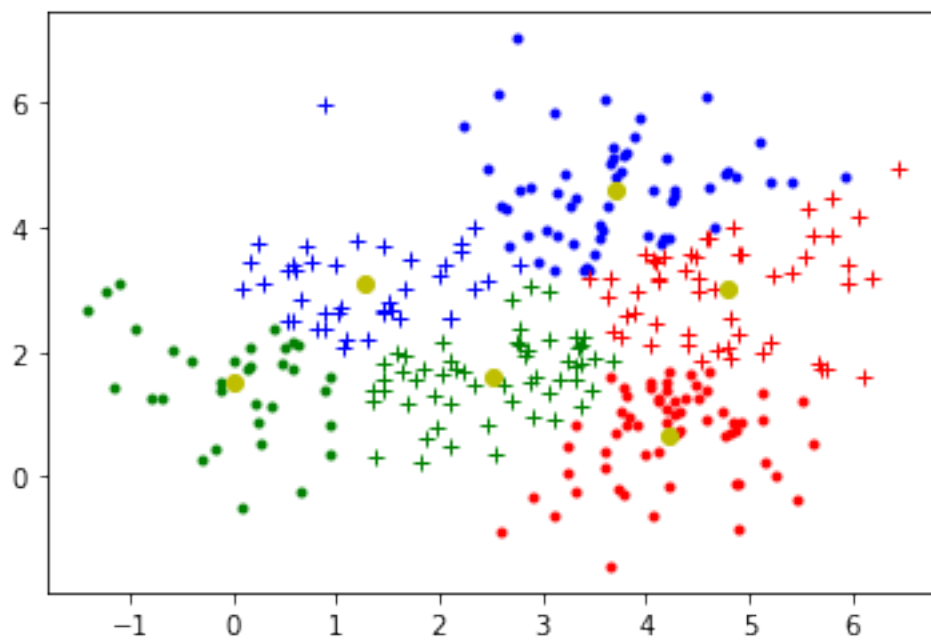
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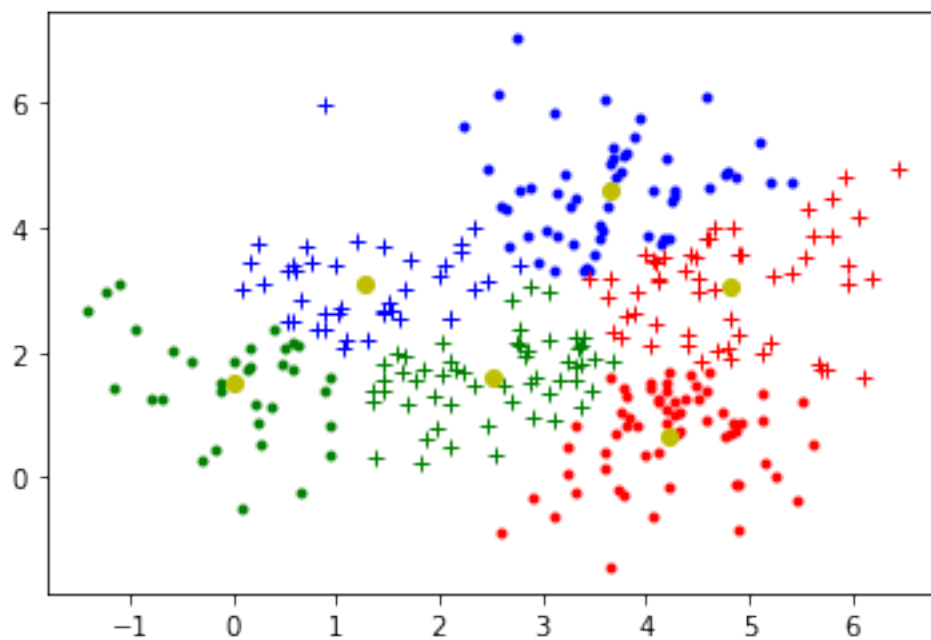
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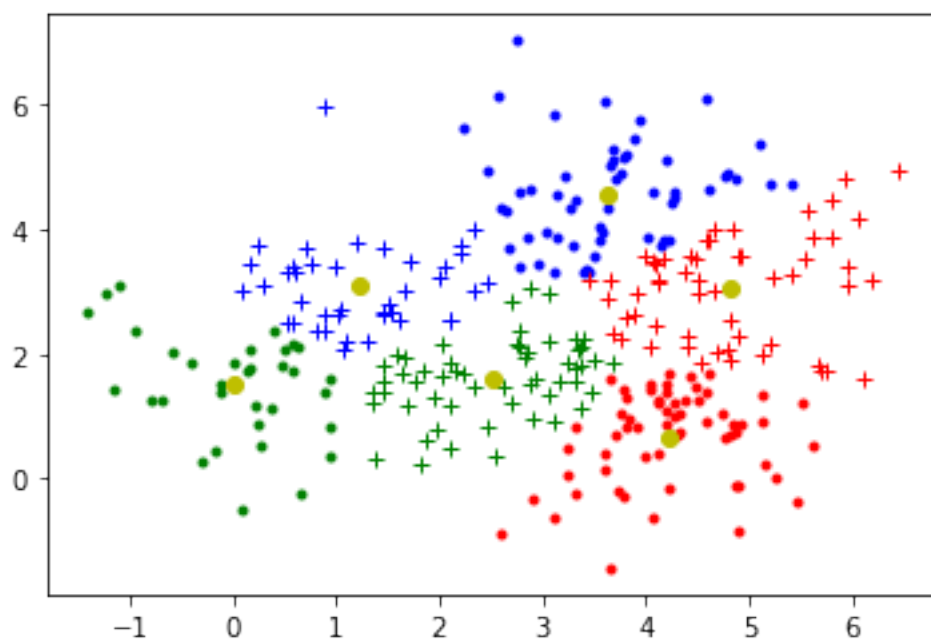
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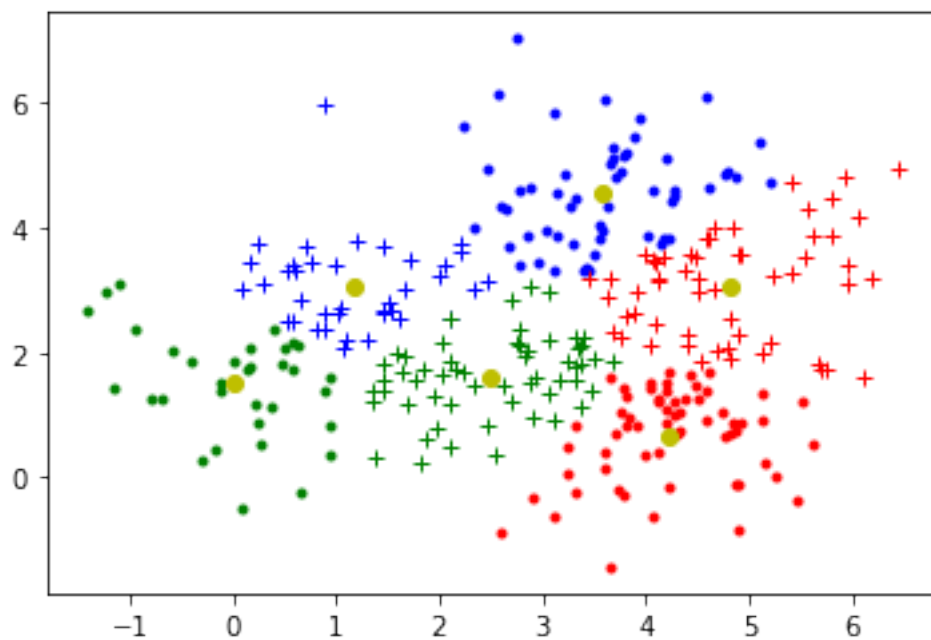
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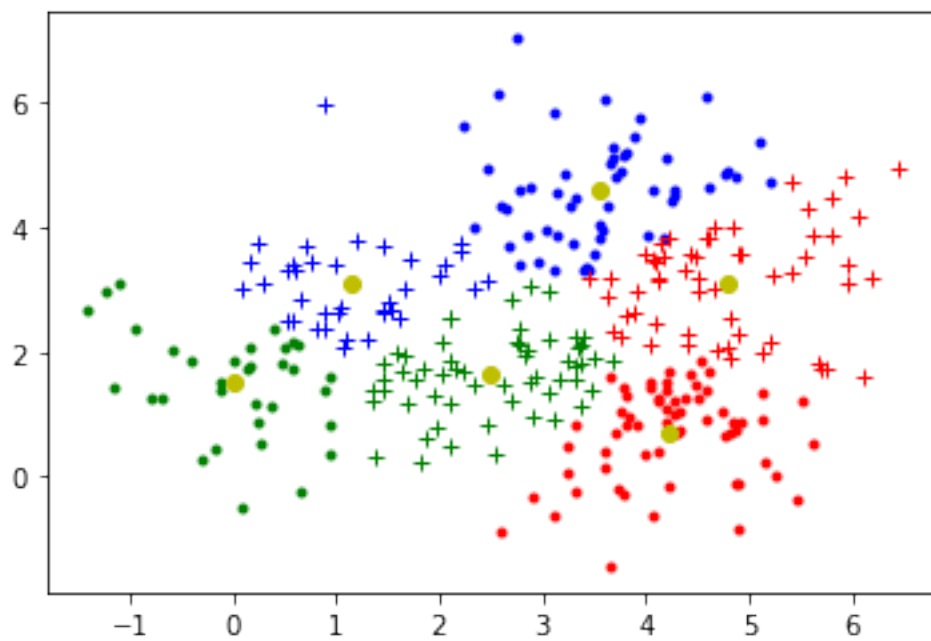
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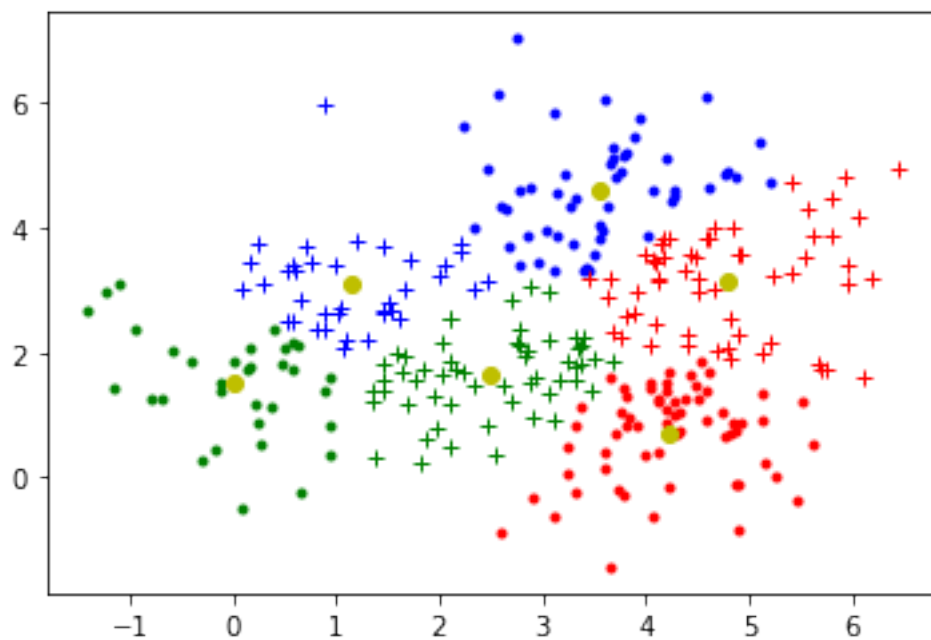
--iteration 18



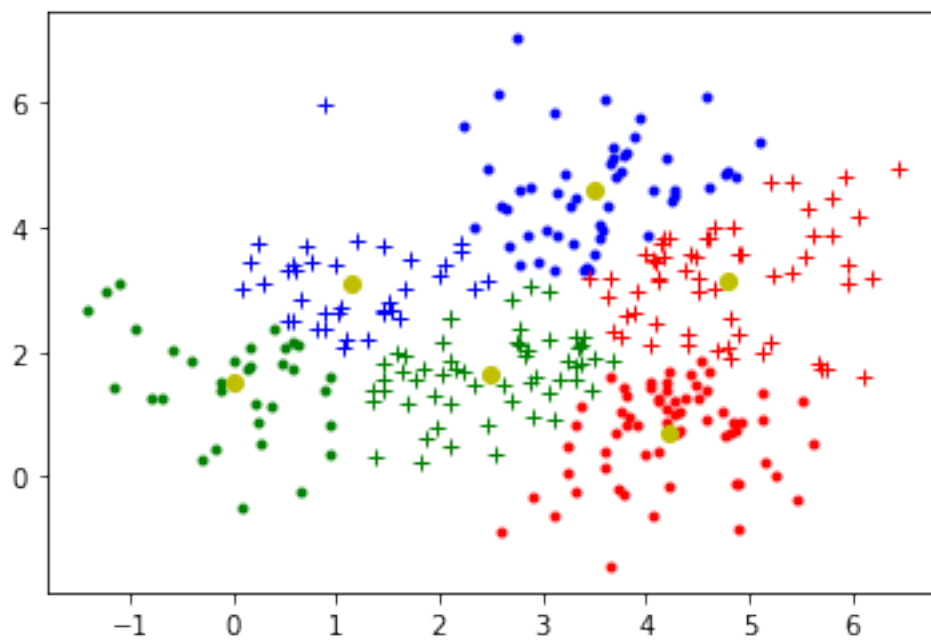
--iteration 19



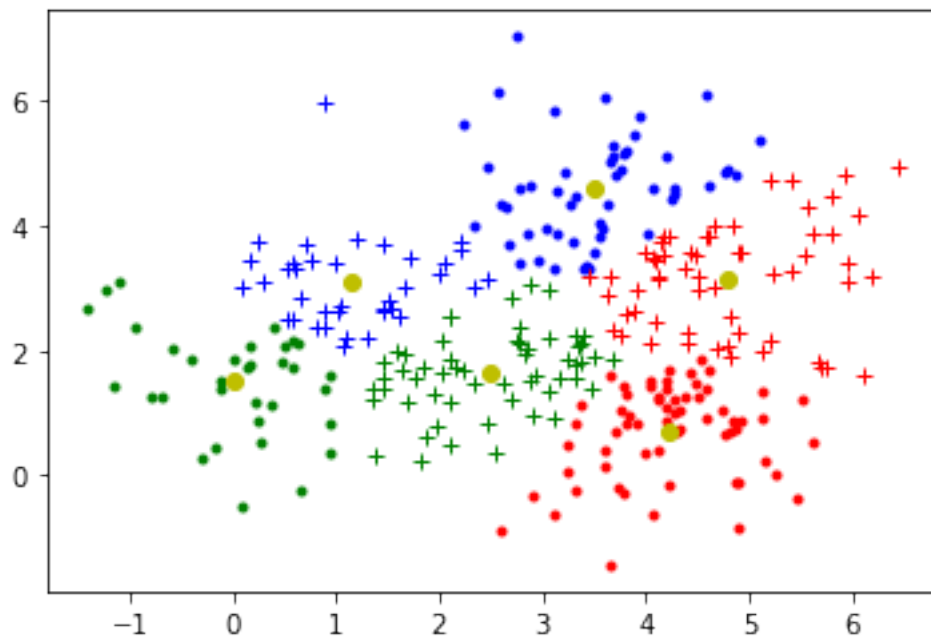
--iteration 20



--iteration 21



--iteration 22



Elapsed time is 36.646225 seconds

obj = 316.13043209974694