

K-Means Assignment

The kmeans_tko35.m file contains my implementation of the K-Means algorithm. Here, I will demo its use.

First, let's take a look at the original data with the target clusters

```
og_data = readtable("test_data.csv");  
% Plot data  
figure('Position', [0 0 400 300]), gscatter(og_data.x, og_data.y, og_data.Cluster);  
title('Original Data with Target Clusters')
```



Caption: A scatterplot showing the original data in the target clusters.

Next, I'll use my clustering function to reproduce the target clusters.

```
new_data = kmeansFun_tko35(og_data{:, 1:2}, 2);  
% Plot data  
figure('Position', [0 0 400 300]), gscatter(new_data(:,1), new_data(:,2), new_data(:,3));  
title('Data from Custom Clustering Function')
```



Caption: A scatterplot showing the data generated by my clustering function.

Conclusion: As you can see by comparing the figures, my function is able to reliably reproduce the target clusters.