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**Subject: Project 7**

**Class: DSCI 512**

**Section: 01W**

**Instructor: Dr. Nengbing Tao**

**File Name: Project7\_Kungulio\_Seif.docx**

1. Load the dataset CreditCards.csv into memory.

A computer screen shot of a computer program

AI-generated content may be incorrect.

1. Perform the k-means cluster analysis
   1. Remove the first column: CUST\_ID since it doesn’t provide any info for cluster.

A computer screen with white text

AI-generated content may be incorrect.

* 1. Determine the optimal number of clusters. Justify your answer. It may take longer running time since it uses a large dataset.

A graph showing the growth of a number of statistic

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* 1. Perform k-means clustering using the optimal number of clusters.

A screenshot of a computer program

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* 1. Visualize the clusters in different colors.

A colorful dots and circles

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