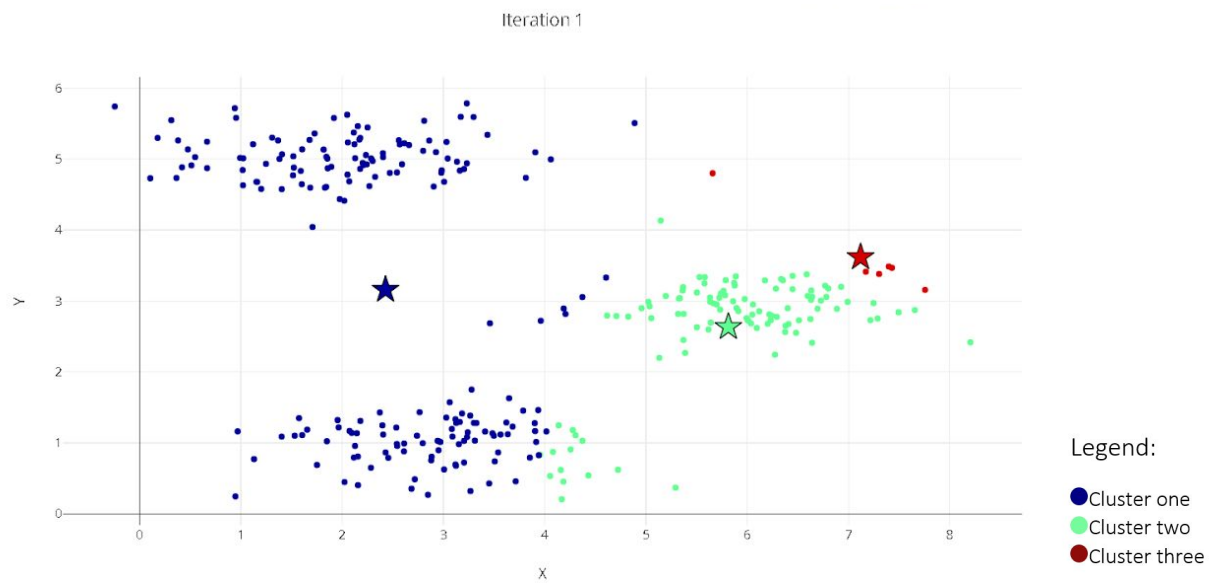Arvin S. Arbuis
Trisha Nicole B. Butas
Mae Celine C. Erasmo
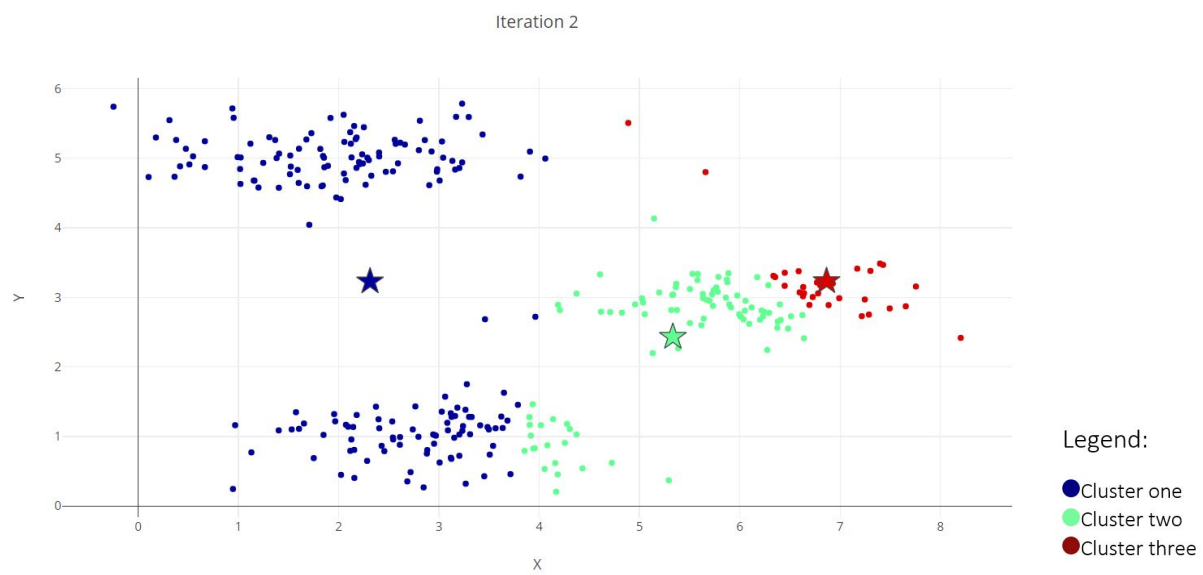
I. K-Means Scatter Plot

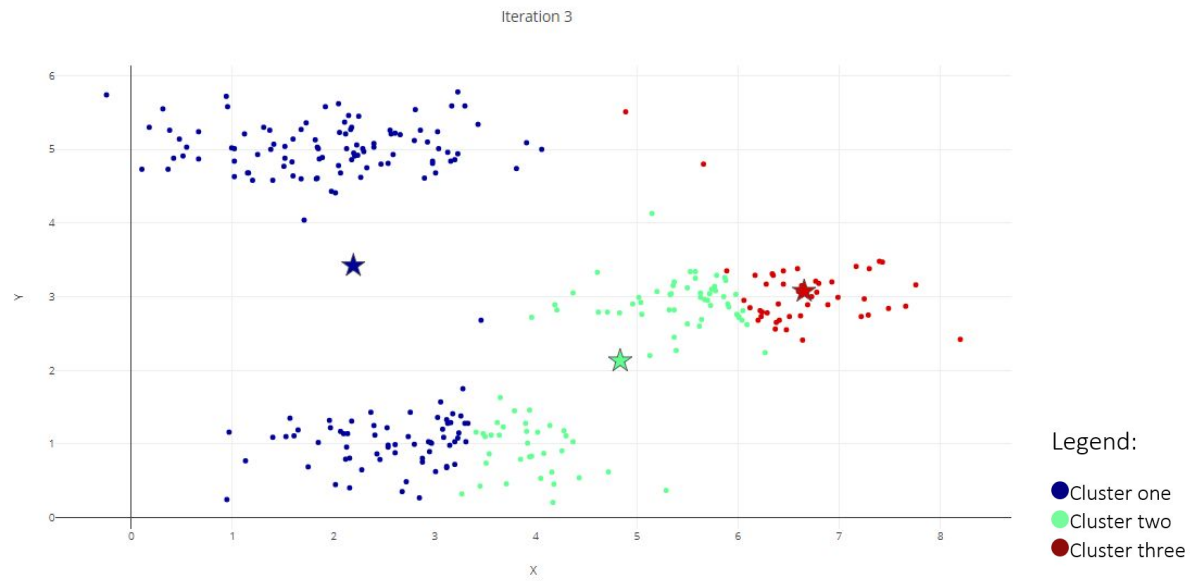**Iteration 1**

Iteration 1

J = 1.906512

Iteration 2

Iteration 2

J = 1.701554

Iteration 3

J = 1.654304

Iteration 4
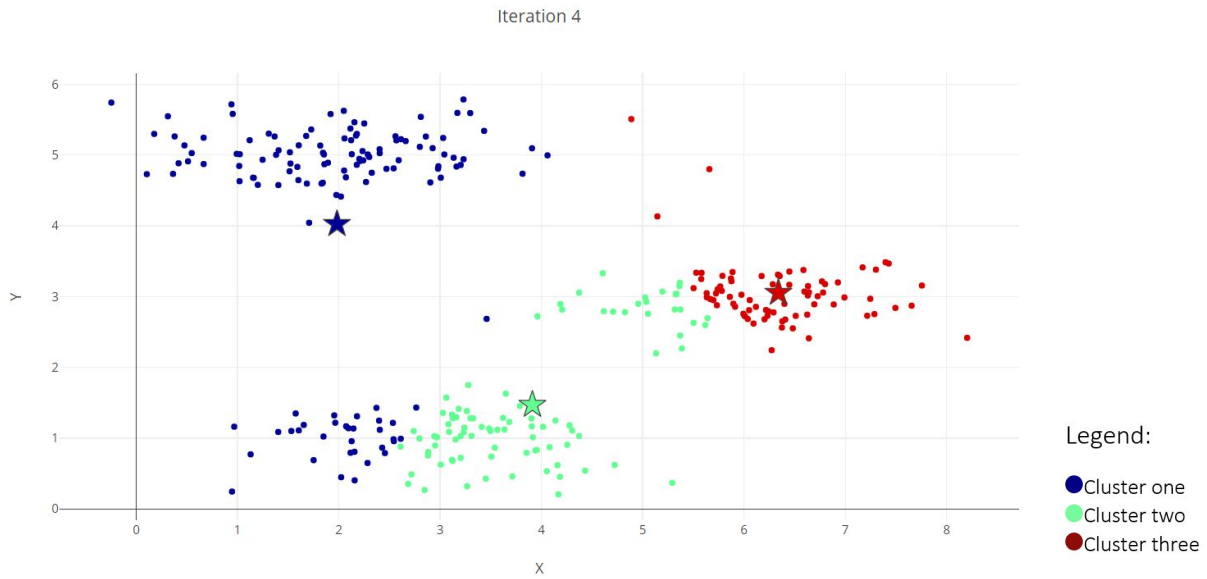
J = 1.540300

Iteration 5
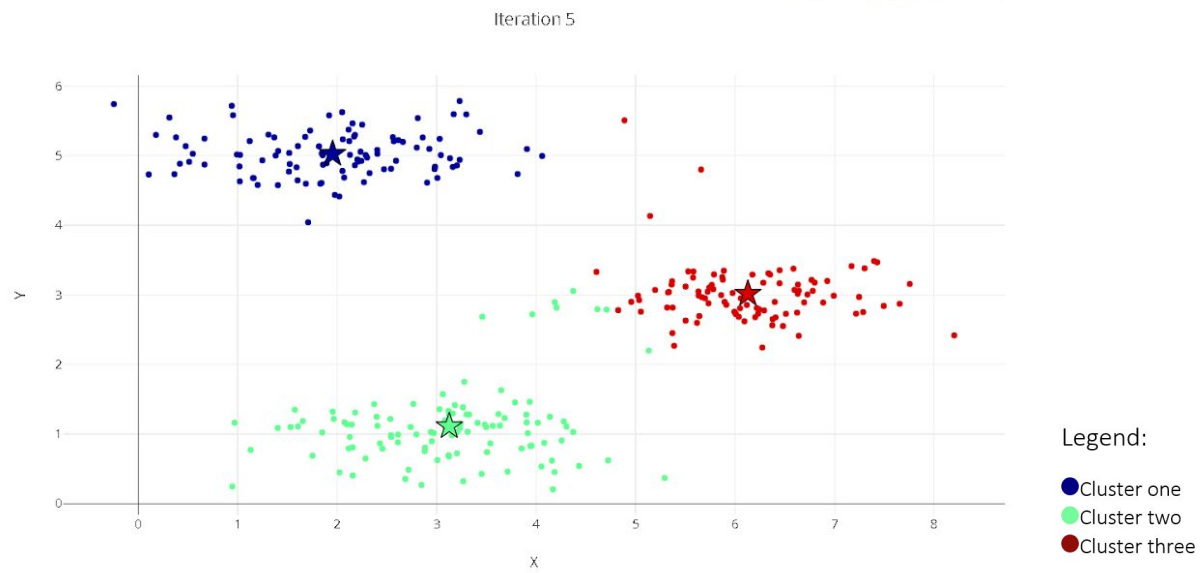
J = 1.100611

Iteration 6
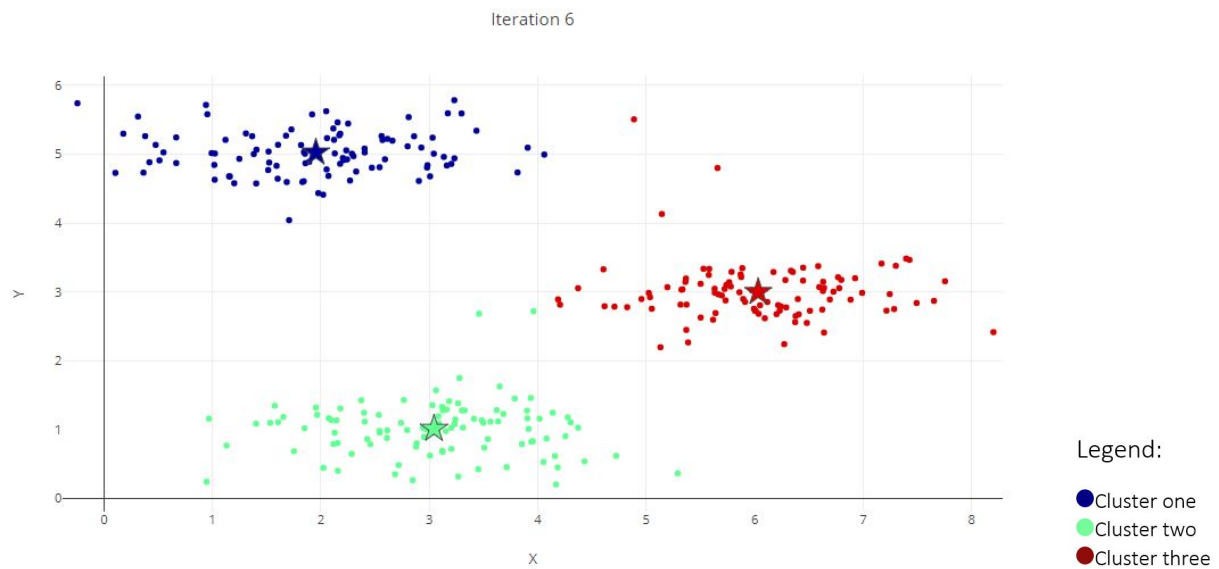
J = 0.801696

Iteration 7
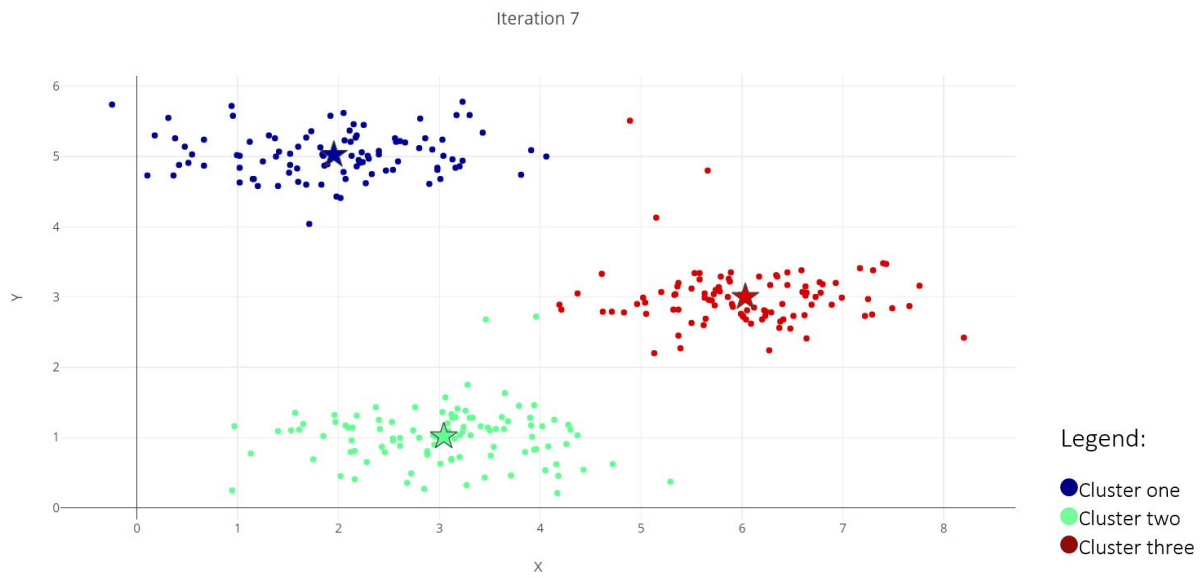
J = 0.796849

Iteration 8
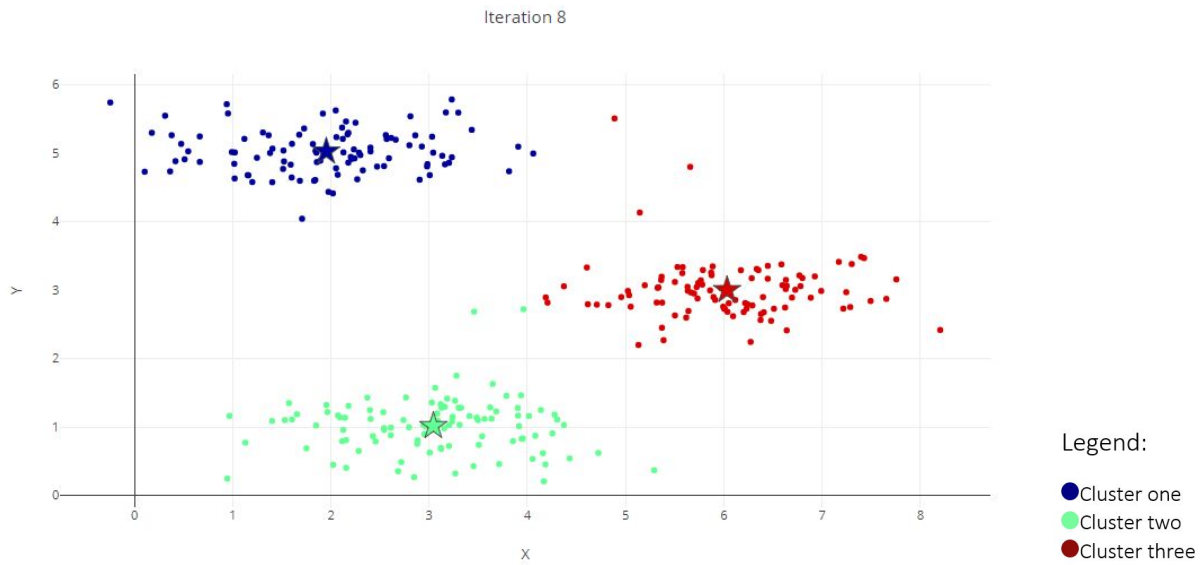
J = 0.796833

Iteration 9
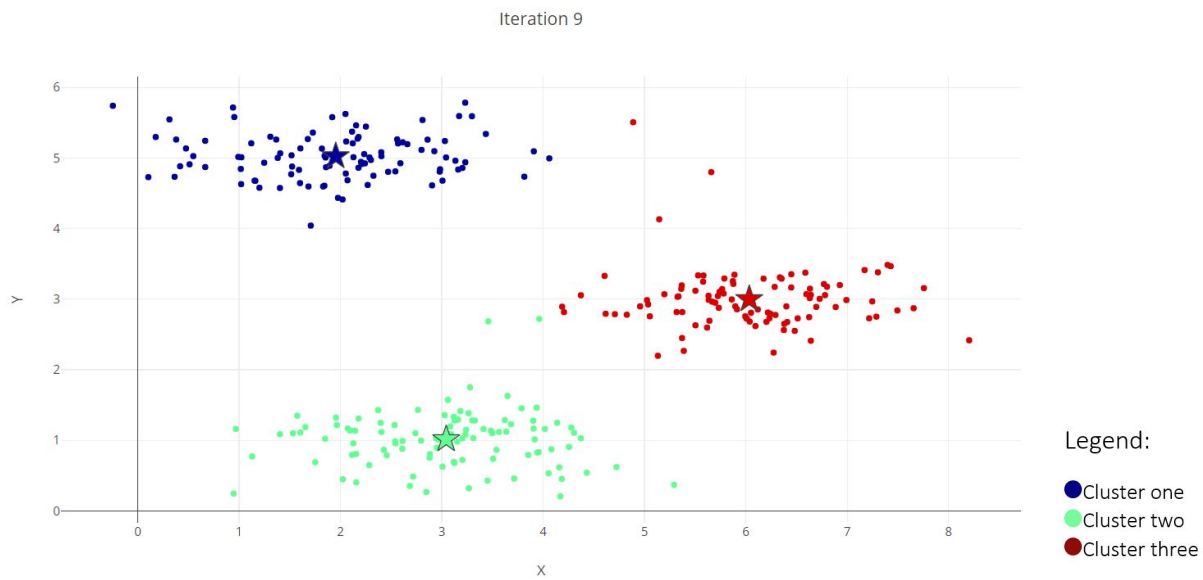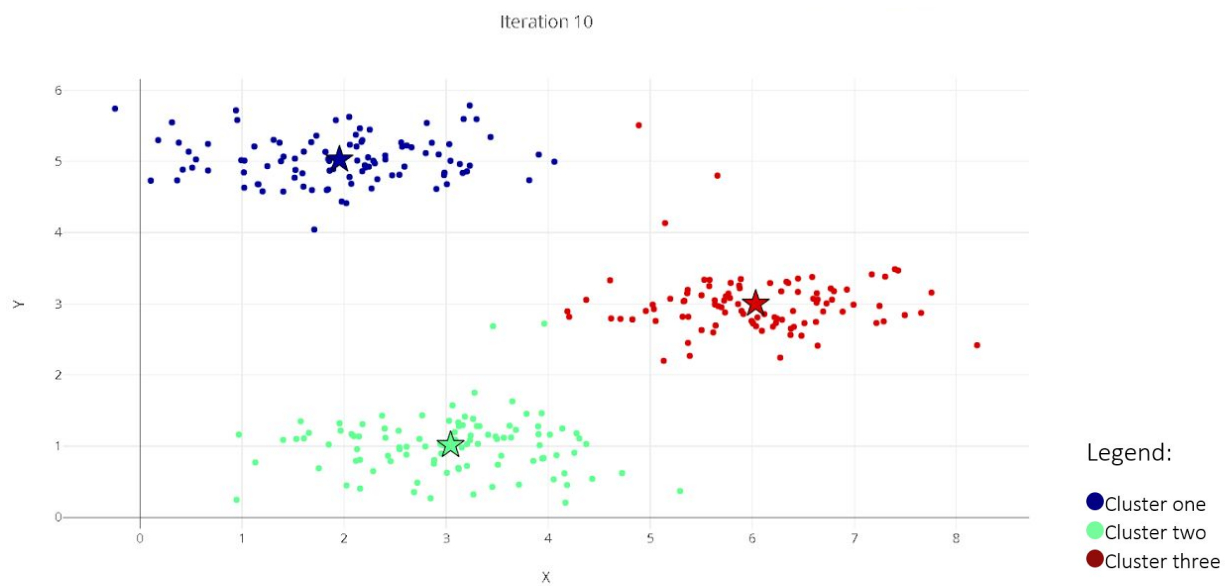

Iteration 9

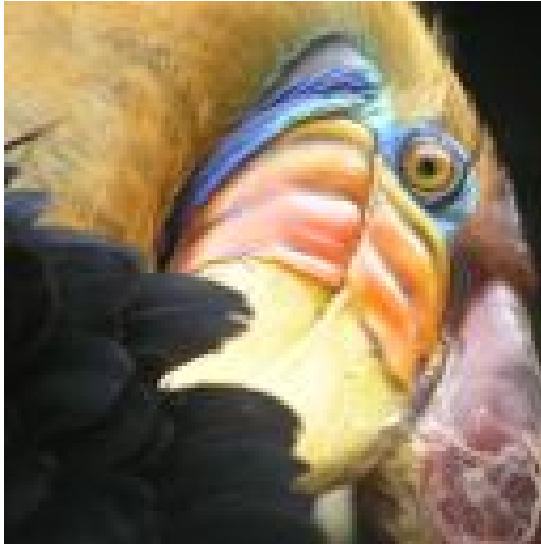**J = 0.796832**

Iteration 10

Iteration 10

J = 0.796832

Observation:
- The cluster movements are evident and differences in their cost are high on the first half of the iterations.

- In the last half of the iterations, the centroids are already near their optimal positions, thus, the differences in their costs are minimal.
-

II. Image Compression

Uncompressed Image

Compressed Image

Uncompressed Celine

Compressed Celine

Uncompressed Arvin & cat   **Compressed Arvin & cat**

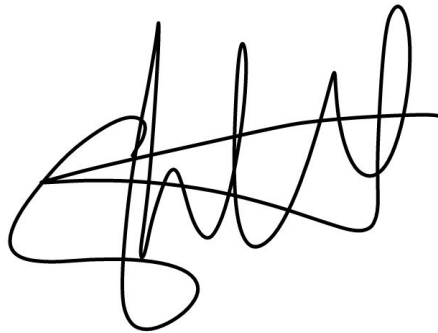**Uncompressed Trisha**   **Compressed Trisha**

III.   Contribution

All of us contributed in the development (logic and implementation) of the project, although we coded on one laptop (Butas's laptop).

Members:

Arvin S. Arbuis

Trisha Nicole B. Butas

Mae Celine C. Erasmo