![edX]

Course > Unit 4 Unsupervised Learning (2 weeks) > Lecture 13. Clustering 1 > 4. Another Clustering Example: Image Quantization

---

**Audit Access Expires May 11, 2020**
You lose all access to this course, including your progress, on May 11, 2020.

# 4. Another Clustering Example: Image Quantization

# Another Clustering Example: Image Quantization



| ▶ | 0:00 / 0:00 | | ▶ 1.25x | 🔊 | ✕ | CC | 66 |

## Video
**Download video file**

## Transcripts
**Download SubRip (.srt) file**
**Download Text (.txt) file**

---

## Clustering in Image Quantization

1/1 point (graded)
In the video above, Professor Barzilay described how we can cluster colors into similar groups, and re-color the image with the "representative" colors of each cluster.

As shown in the lecture, the image below is the original image.

On the other hand, the image below is the compressed image after clustering into $K$ clusters.



What is the value of $K$, the number of clusters?

$k =$

| 2 |
|---|

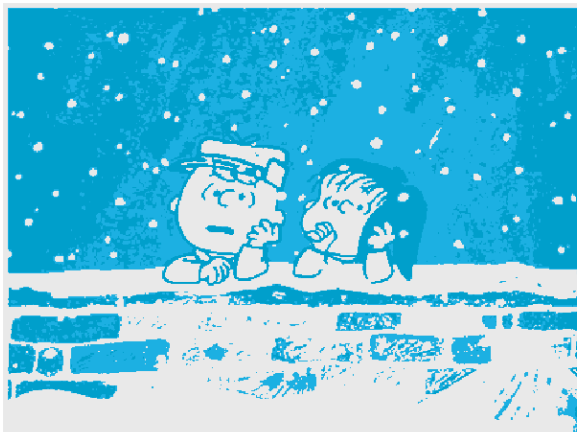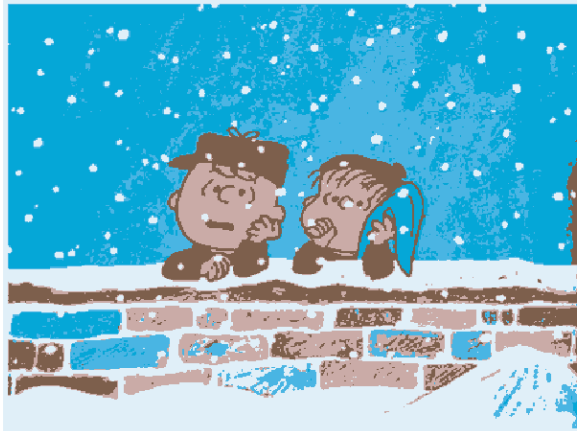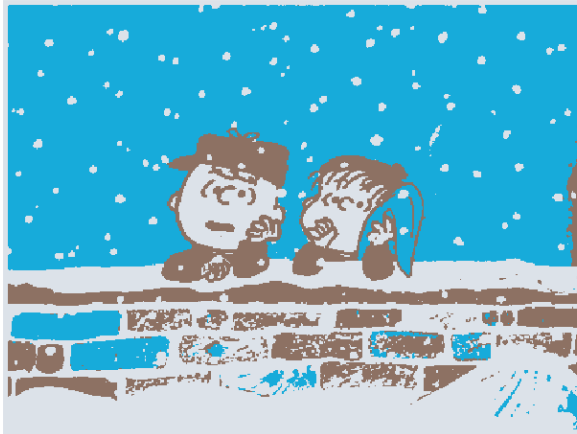✔ **Answer:** 2

**Submit**     You have used 1 of 2 attempts

ⓘ   Answers are displayed within the problem

## Clustering in Image Quantization

1/1 point (graded)

If we use $K = 3$, which of the following will be the compressed image?

✔

**Solution:**

As $K = 3$, the resulting image should only consist of 3 colors. The 2nd and 4th choices have more than 3 colors. The 3rd choice has 3 colors, but they are random colors selected from the original image, not the representative colors, which are supposed to be the cluster means of the 3-means algorithm.

**Submit**    You have used 1 of 2 attempts

ℹ  Answers are displayed within the problem

# Discussion

**Hide Discussion**

**Topic:** Unit 4 Unsupervised Learning (2 weeks) :Lecture 13.
Clustering 1 / 4. Another Clustering Example: Image Quantization

**Add a Post**

| Show all posts | by recent activity |
|---|---|
| ☑ **map** <br> why the mapping is of 32 colors (new image) X 24 bits (original image)??... i guess that we nee... | 2 |
| ? **Number K** <br> Is the number that professor got 640? How did she get that number? Thank you | 3 |
| ? **not same picture** <br> The picture here stated as the original is not the same original as in the lecture size. Linus hat... | 3 |