**Example 6: Unsupervised Learning**

6a. An analyst has a collection of photos of different overhead locations, but none of them are labeled or classified. However, they do have groupings of what they mostly believe are close. Could unsupervised learning techniques be helpful in this scenario and how?

6b. What are the two types of neural networks used in Generative Adversarial Networks (GANs)? Explain how each works.

6c. Cyberattacks are a common problem for any computer system. However, machine learning is helping to mitigate this threat and recognize when attacks are occurring. How could we develop a generative adversarial neural network to better protect our systems?

6d. Explain how k-means clustering works.

6e. In clustering, why does k = n, where n is the size of the entire dataset, produce an overfit model? What is a better choice for k when the size