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3. Introduction to the K-Medoids Algorithm

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Exercises due Apr 19, 2023 08:59 -03 Completed

Introduction to the K-Medoids Algorithm**Video** [Download video file](#)**Transcripts** [Download SubRip \(.srt\) file](#) [Download Text \(.txt\) file](#)**K-Medoids Algorithm as a Variation of K-Means**

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As explained in the lecture video, the K-Medoids algorithm is a variation of the K-Means algorithm that addresses some of the K-Means algorithm's limitations. The K-Medoids algorithm is given by the following steps:

1. Randomly select $\{z_1, \dots, z_K\} \subseteq \{x_1, \dots, x_n\}$

2. Iterate

1. Given z_1, \dots, z_K , assign each $x^{(i)}$ to the closest z_j , so that

$$\text{Cost}(z_1, \dots, z_K) = \sum_{i=1}^n \min_{j=1, \dots, K} \text{dist}(x^{(i)}, z_j)$$

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Concept Check: K-Medoids Algorithm



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