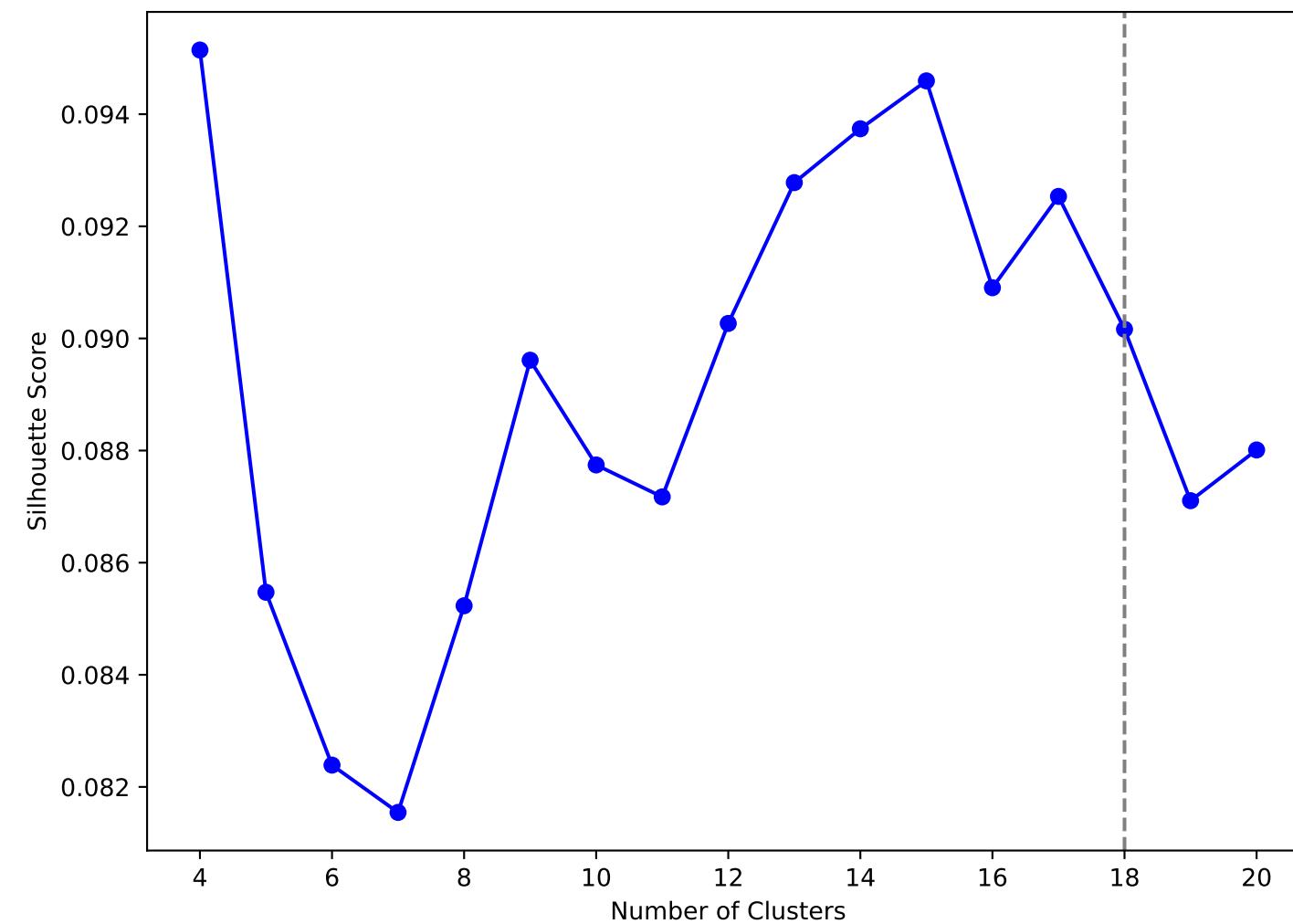
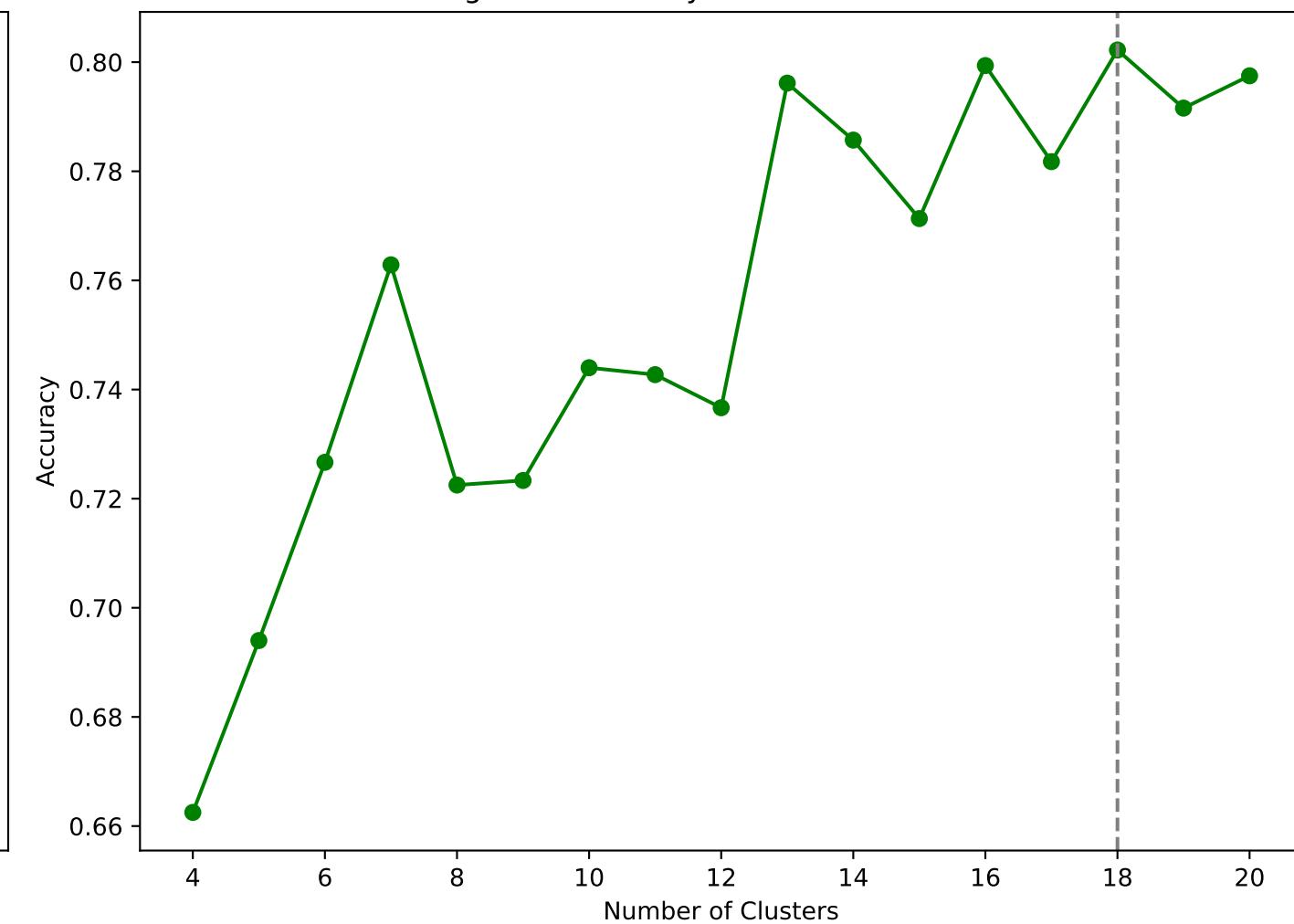


# Pca\_kmeans Clustering Metrics Summary (Model: deepseek-r1-distill-qwen-1.5b, Layer: 12)

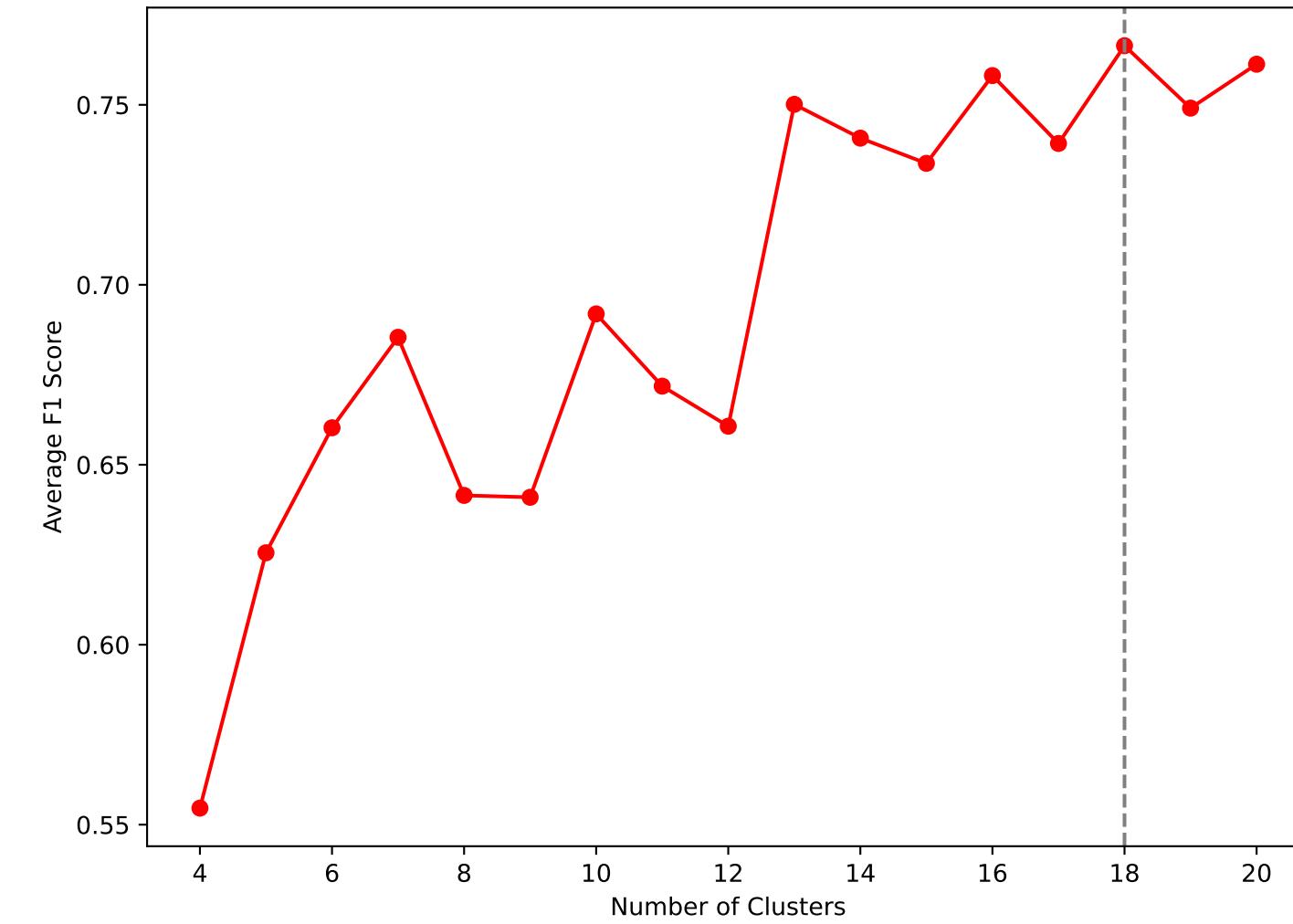
Silhouette Score vs. Number of Clusters



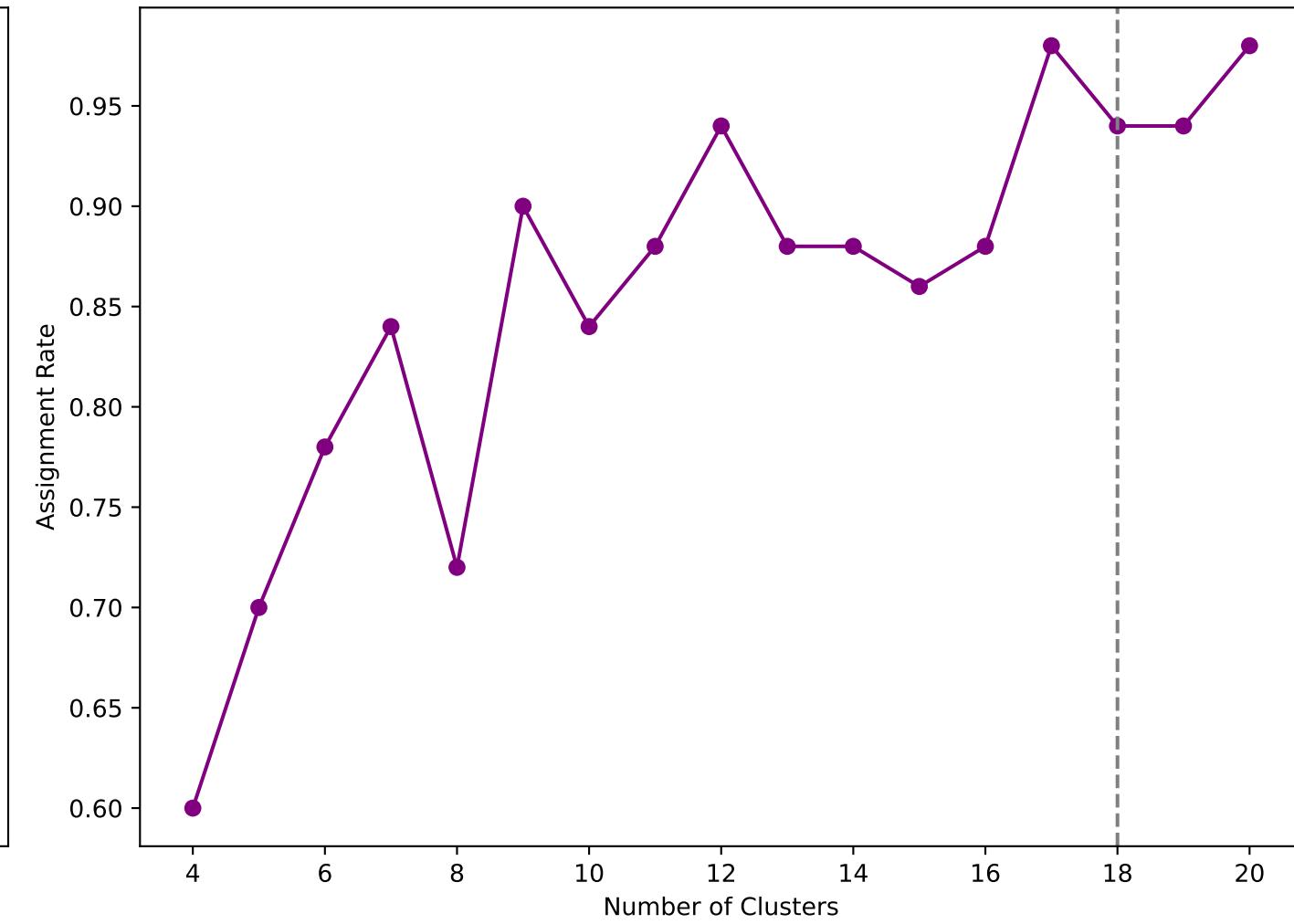
Autograder Accuracy vs. Number of Clusters



Average F1 Score vs. Number of Clusters



Completeness: Assignment Rate vs. Number of Clusters



Centroid Orthogonality vs. Number of Clusters

