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A FIGURES FOR ELM CONSTRAINT PROOFS

A.1 Homogeneity Constraint

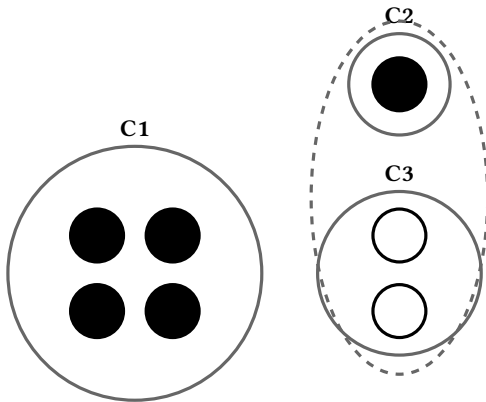


Figure 5: Homogeneity constraint: black nodes belong to one cluster and the white nodes belonging to another cluster. Shown are two partitions: the homogeneous $D_1 : \{C_1, C_2, C_3\}$ and the mixed $D_2 : \{C_1, C_2 \cup C_3\}$

A.2 Rag Bag Constraint

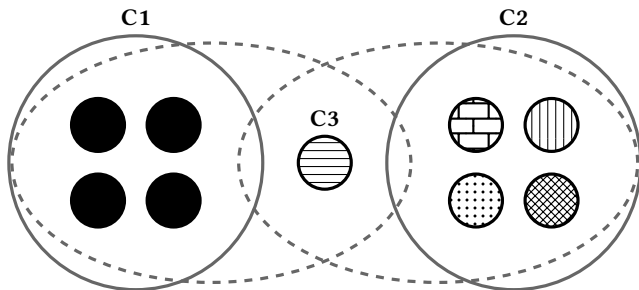


Figure 6: Rag Bag constraint: black nodes belong to one cluster and all other nodes are singleton clusters. Shown are two cluster assignments: $D_1 = \{C_1, C_2 \cup C_3\}$ and $D_2 = \{C_1 \cup C_3, C_2\}$.

A.3 Completeness Constraint

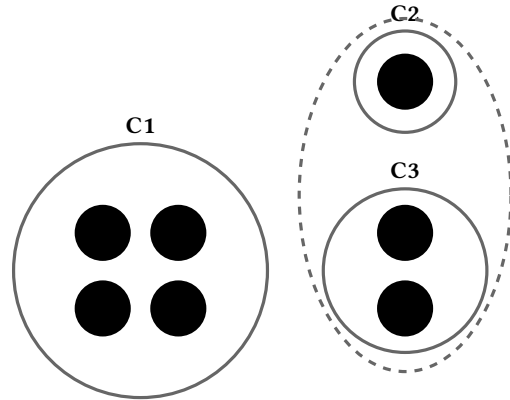


Figure 7: Completeness constraint: All nodes belong to the same cluster. Shown are two partitions: $D_1 = \{C_1, C_2 \cup C_3\}$ and $D_2 = \{C_1, C_2, C_3\}$