1 ILP

MLP : Find the maximum subset of nodes in graph $G = (V, E)$ which are pairwise non-adjacent ILP

- $\forall v \in V$ let $x_v \in 0, 1$

By turning MIS into Integer Linear Programming, we've shown that ILP is NPC.

Translate Vertex count problem Given graph $G = (V, E)$, find $VC \subset V$, where VC covers each $e \in E$

Want some linear formula to be minimized, Obj $\Sigma x_v \rightarrow$ min, where $\forall e \in E$ with vertices (u, v), $x_u + x_v \geq 1$