Exercise 13.4. Let $G = (V, E)$ be a directed graph. We say that a set of vertices is *almost independent* if each $v \in S$ has at most one neighbor in S.[5] Consider the problem of computing the maximum cardinality of any almost independent set of vertices. For this problem, either (a) design and analyze a polynomial time algorithm (the faster the better), or (b) prove that a polynomial time algorithm would imply a polynomial time algorithm for SAT.

[5] Two vertices u and v are neighbors if they are connected by an edge.

Solution. □