

Aleksas Murauskas

Q3.

First show NP, create certifier

Problem is A

Inputs are $n \times m$ table and k students and a set of students

For every pair of students in S , s_a and s_b check if they share a favorite thing, if one pair does not, return False. if all pairs share a thing, then return True

This polynomial time as max pairs is n^2

We can solve Clique

Clique $\leq_n A$

Clique looks if there is a clique in G larger than k_0

A can be used to solve Clique

If there is an edge between two nodes, then they share a favorite thing, the set S will then represent a clique

Using an Oracle for A, it helps us solve clique