

## CSP

Monday, September 26, 2016 9:32 AM

## Constraint Satisfaction

- Find a state config that doesn't violate constraints

(non-sequential)

- State: A set of variables  $X_1, X_2, X_3, \dots, X_n$  each of which can take a different value

- Domain: Each variable  $X_i$  has a corresponding set of values it can take  $D_i$

- Constraint:  $C_1, C_2, \dots, C_m$  each involving a number of variables & specifying legal values

- Solution: An assignment of values to variables  $\in D_i$

$$\{X_1 = v_1, X_2 = v_2, \dots\}$$

You don't know the goal  $\rightarrow$  Not A\* (Not sequential)

Not hill-climbing  $\rightarrow$  doesn't guarantee optimal solution

You have to find the optimal solution

